

North

DRAFT November 2007 - Work in Progress

Corridor-specific Report B

Phase II and III
City of Houston

November, 2007

The **Planning** Partnership
in collaboration with:

Asakura Robinson Company

• Gunda Corporation

• Cushman & Wakefield LePage

• Working Partner



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Introduction

The North Transit Corridor is an extension of the existing Main Street Corridor and terminates at the Northline Mall. The Corridor varies in character. At the north end it passes through single-detached residential areas, as well as larger industrial areas. The right of way is quite narrow as it passes Moody park and turns east on Boundary Road. The Main Street segment of this corridor is appropriate for infill mixed-use development.

While the North Corridor shares many of the characteristics of the East and Southeast Corridors, it is distinct in a number of ways. The Corridor is an extension of the existing Main Street Line so it has important anchors at each end. Much of the Corridor runs through industrial areas with large buildings and parking space, which should lend itself to future development. Most importantly, the North Corridor is in proximity to neighborhoods that already use different forms of transit so it has a high percentage of existing riders.

The Corridor report presents a strategy for encouraging the forms of development that will be supportive of transit, as well as creating pedestrian scaled streets that lead from the surrounding neighborhoods to the Transit Street. The report also suggests that most development will occur within a five-minute walk of the stations. This will result in large portions of the Corridor that will not develop in the short term. These have been described as stable neighborhoods and, because of their distance from the stations, they will be protected from redevelopment.

An approach to infill development, the attendant ordinance controls and urban design guidelines advance the concept that different forms of development should be designed to respect the adjacent neighborhoods. As a result, the residential areas located on the east and west sides of Main Street will have a row of half lot depth infill development that will step down in height toward the existing homes. At the same time, areas where there is space, will see more intense development such as the Moody Station on the north side of Moody Park. The demonstration plans suggest one way of providing for extensive redevelopment in a form that respects the scale of the adjacent neighborhoods.

1

Context/Background Analysis

This capter provides the context and background for the North Corridor.

B 1.1

North Urban Corridor Study Area

The North Urban Corridor is essentially the northern extension of the existing Main Street Urban Corridor. Beginning at the northern terminus of the Main Street line at the University of Houston, the North Corridor extends north along North Main Street and Fulton Street, terminating at the Northline Mall.

The North Corridor is approximately 4.5 miles long. The eastern and western boundaries of the North Urban Corridor Study Area – measured at a 1/4 mile on either side of the proposed transit line – are shown on the adjacent



METRORail heading north toward University of Houston Downtown



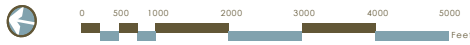
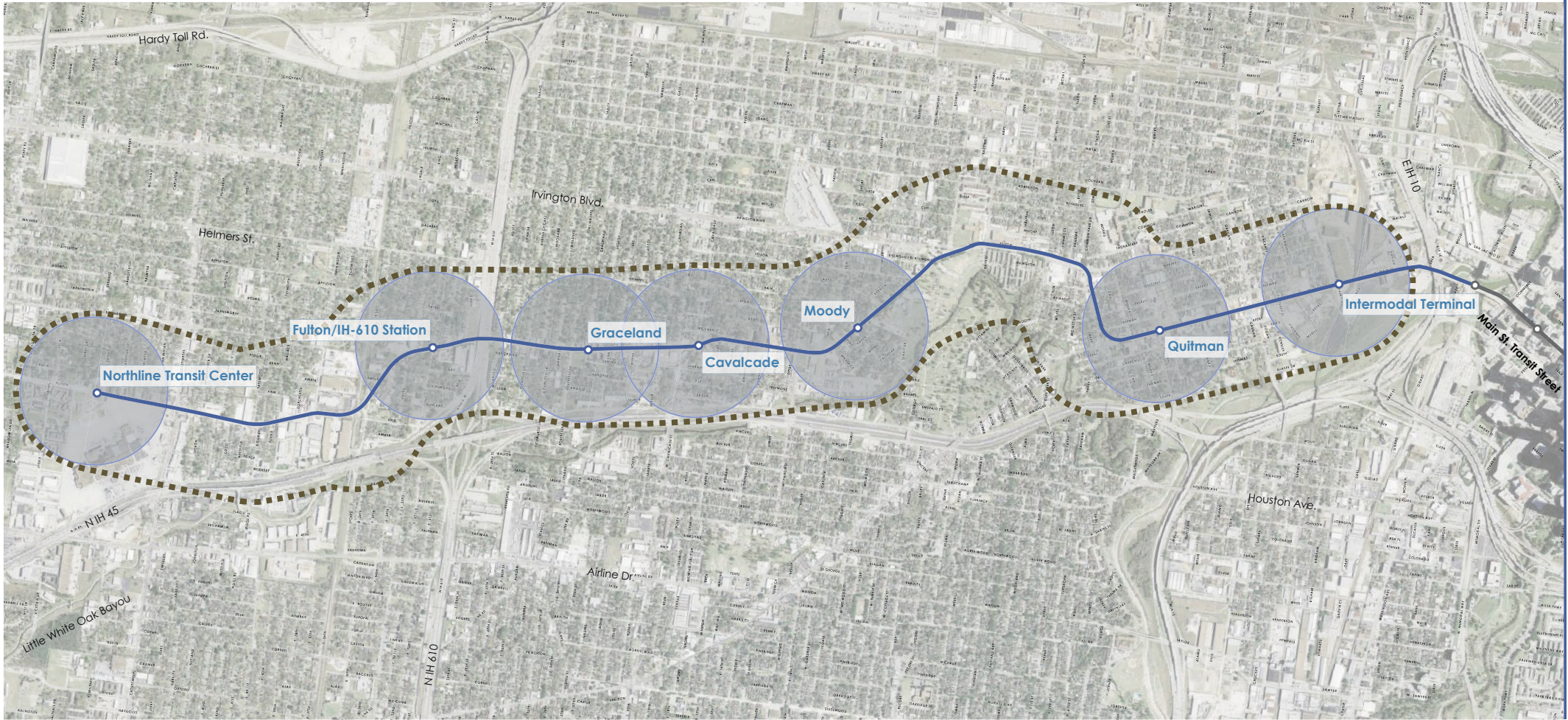
View looking south down Main Street from Boundary Street



View of Downtown from the corner of Fulton street and Luzon Street

Urban Corridor Study Area

- North Transit Street
- Connecting Transit Street
- Corridor Study Area
- 5 Minute Walking Distance to Station





Residential Development north of Wallace Street



South entrance to Moody Park - Example of open space land use



Affordable housing development adjacent to Moody Park

B1.2

Context of the North Corridor

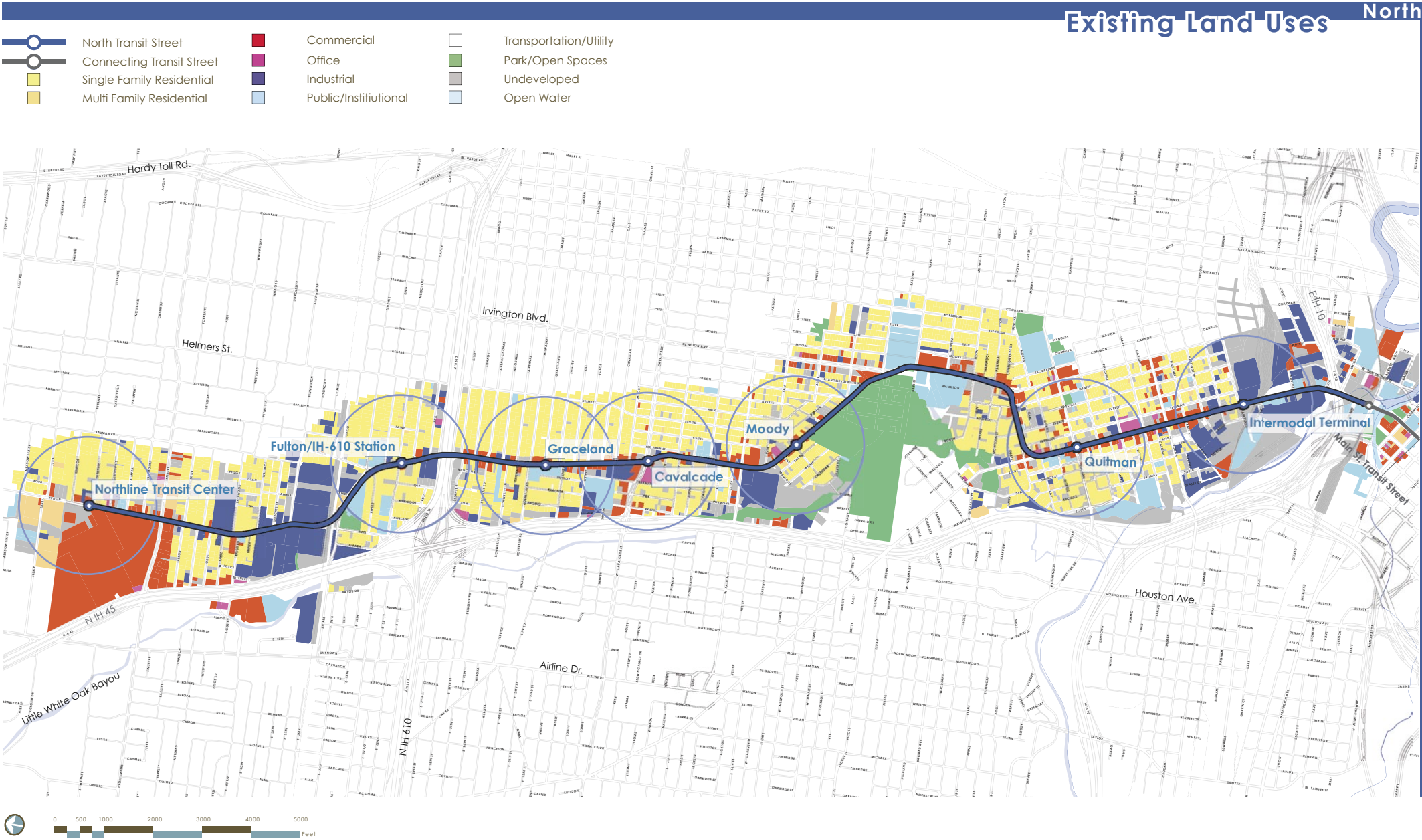
B1.2.1 Land Use

Part of this Urban Corridor Planning study is to understand the common and unique characters of each Urban Corridor. Two elements that define the area are the land uses as well as the size and scale of buildings in the study area.

The map on the opposite page illustrates the range of existing land uses along the North Urban Corridor. The area is composed of industrial and employment uses, single and multi-family residential uses, retail commercial use, open spaces, institutional uses (educational and medical-related) as well as limited office uses.



Low-rise commercial/office buildings on Main St. south of Boundary St.





Small building footprints along Boundary Street



Medium sized building fronting on Main St. south of Boundary St.

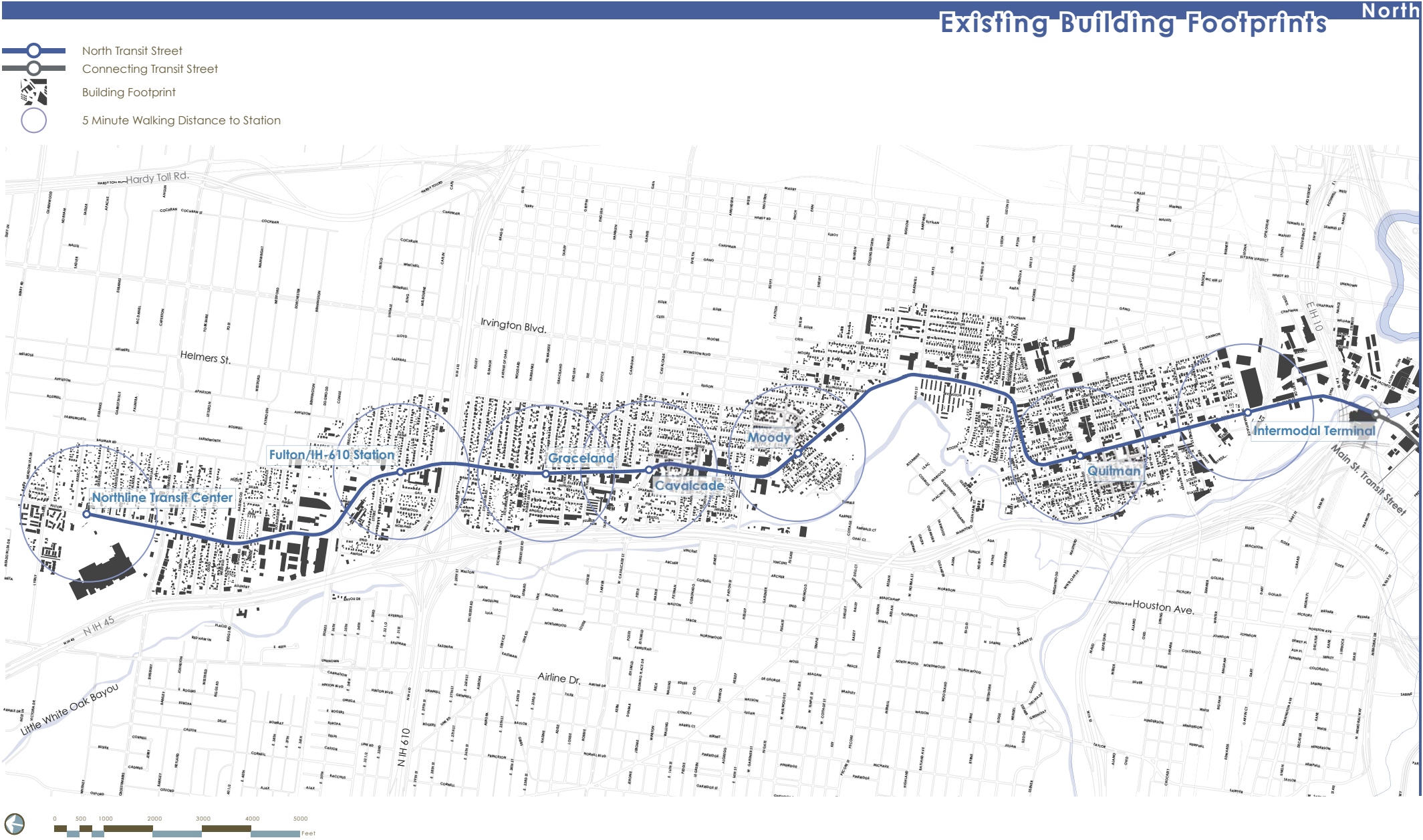


Large building footprint on Main Street and Naylor Street

B1.2.2 Building Footprint

The map on the facing page illustrates the size and scale of buildings found in the North Corridor. All existing buildings have been shaded to help create a picture of the pattern created by different buildings, streets and open space - or the area's urban fabric.

The typical small downtown block dimensions of 250 by 250 feet extend north from the downtown to Hogan Street. At this point, the block dimensions shift to a rectangular shape as block frontage lengthen while block depths remaining consistent. The block pattern changes considerably north of Cavalcade, as blocks elongate east to west with narrowing frontage along the Transit Street. Interspersed throughout the North Corridor are a various atypical larger blocks, accommodating various employment uses, large scale retail commercial uses, parks as well as a number of schools. The building footprints throughout the Corridor are typified by a significant prominence of single detached homes in adjacent neighborhoods and flanking the Transit Street at various points, with medium sized buildings generally lining the Transit Street frontage.





The Vaquero Sculpture in Moody Park

Park	Acres	Acquired	Park Class
Moody	1925	34.9	Regional
Stude	1915	42.4	Regional
Montie	1937	23	Community
Irvington	1965	6.3	Neighborhood
Hogg	1920	0.85	Neighborhood
Castillo	1978	1.84	Neighborhood
Woodland	1914	19.67	Neighborhood
Freed Art & Nature	2003	6.15	Reserve/Natural Area
Allen's Landing	1966	1.76	Cultural/Historical
Goyen, Johnny	1987	1.66	Plaza/Square

Target Acquisition Area/Parks

Moody Park expansion
Linear Park along Little White Oak Bayou
Neighborhood Park near Fulton/Hardy Toll Road/Crosstimbers/North 610 Loop
Pocket Park near Fulton/Irvington/North 610 Loop/ Cavalcade



Sidewalk and bicycle lane along Moody Park

B1.2.3 Pedestrian Realm/Mobility Inventory

Parks

The North Corridor area includes historical parks acquired by the Houston Parks Department at the turn-of-the-century. The table on the left lists the North Corridor Parks and the Land Acquisition Target Areas described in the 2001 Parks and Recreation Master Plan. Many City of Houston Community Center Parks offer After School and Summer Enrichment Programs, Summer Food Service Programs and Teen Camps, as well as Teen, Adult and Senior Recreation Programs.

Moody Park is of historical significance and lies directly on the North Corridor (Fulton). Moody Park received a substantial renovation in 1994, and its future expansion is being considered at this time.

Publicly Accessible Open Space

Other privately owned outdoor spaces often allow public access. Hollywood Cemetery, located at 3506 North Main, provides one such amenity. It spans 60 acres along the banks of Little White Oak Bayou, and was founded in 1895.

Sidewalks

Commercial and retail development is generally located along Fulton and Main Streets. At the northernmost point of the Corridor lies the largest single commercial development in the area, the Northline Mall. The southernmost end of the study area is the north edge of Downtown Houston. The

remaining commercial uses are primarily neighborhood oriented retail with a few small hotels and low rise office buildings.

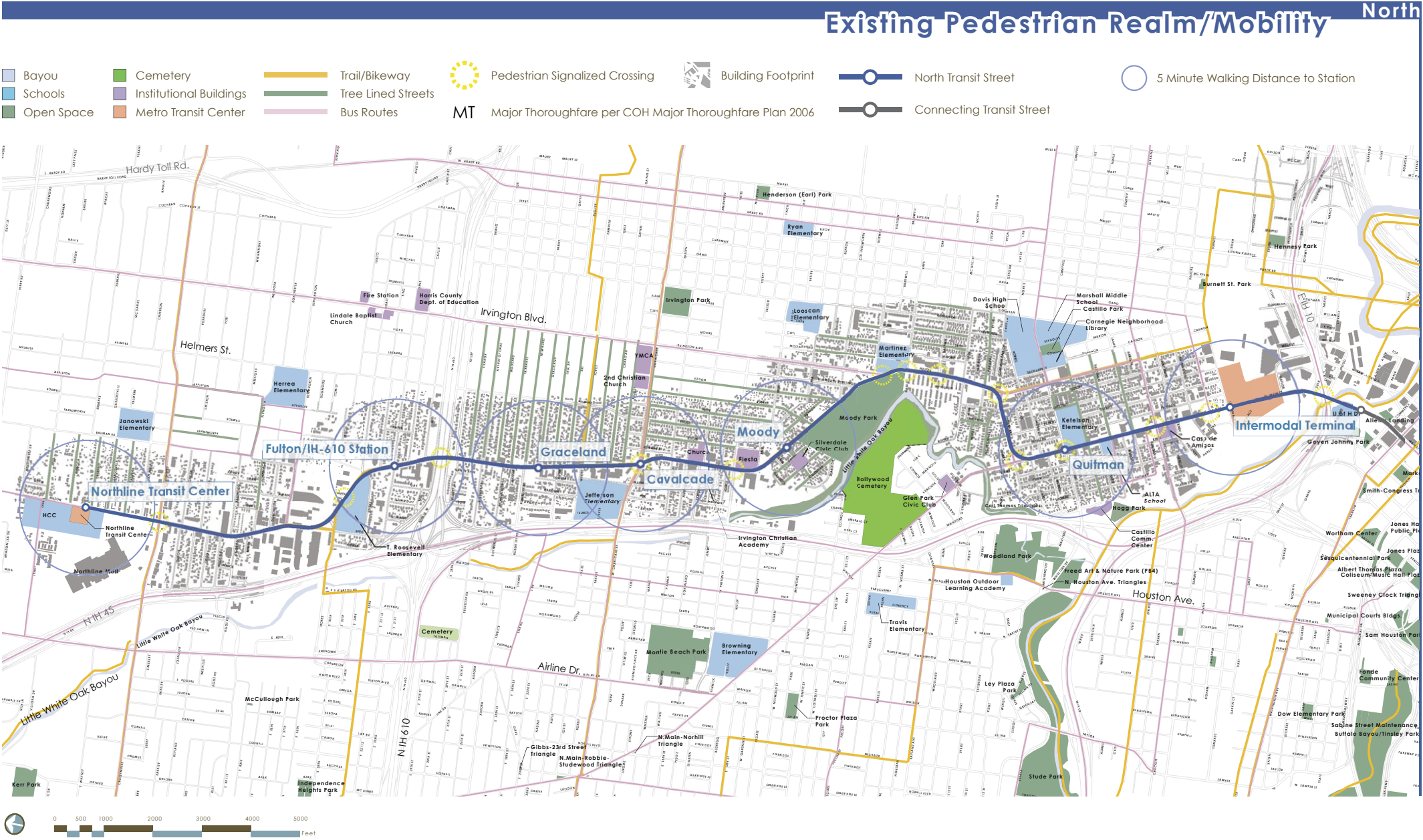
Sidewalks in between the commercial/retail areas and along the Corridor Transit Street are often terminated due to the interjection of parking lots and fences. In general, the existing sidewalks are in need of maintenance, repair, or even replacement in order to provide functional pedestrian access to commercial/retail areas, community facilities accessing the Transit Street.

Most residential areas have paved streets, cement curbs, large street trees, and no sidewalks.

Other portions of Fulton and Main Streets are industrial in nature with warehouses, chain-link fences and storage yards. There are two large pockets of industrial use; the Hardy Yard and the HB&T Railroad yard. These areas historically did not focus on the pedestrian realm and consequently sidewalks are in serious disrepair or are non-existent today.

Community Facilities

Schools - Schools are dependant on pedestrian and bicycle mobility in order for students to safely and efficiently arrive to and depart from North Corridor schools. Public schools within the North Corridor are administered by the Houston Independent School District (HISD). A total of 14 public schools are located within the North Corridor with an enrollment totaling 21,000 students (HISD, April 2004). One alternative/charter school (grades 6-12), HCC-Campus





SPARK Park Dedication at Looscan Elementary



Terminating sidewalk on Fulton St.



Existing sidewalk conditions along Fulton St.

at Northline Mall, and UH-Downtown also serve the North Corridor area.

The SPARK School Park Program is a non-profit organization which increases park space by developing public school grounds into neighborhood parks, when school is not in session. SPARK Parks within the North Corridor Area are located at Adele Looscan Elementary, T.R. Roosevelt Elementary, Jefferson Davis High School, John Marshall Middle School, Thomas Jefferson Elementary School and Peter Janowski Elementary School.

Other facilities accessed by pedestrians

- Several other public facilities also rely on safe and continuous sidewalks for optimum access. These public facilities include:

- ☐ Casa de Amigos Health Center
- ☐ Civic Clubs (Glen Park and Silverdale)
- ☐ Castillo Community Center
- ☐ Northline Mall
- ☐ Numerous churches

Currently, area schools and other significant public facilities are not adequately served by safe and ample sidewalks.

Streetscape

Street trees - Primarily mature trees line the Moody Park street frontage. In addition, many residential streets benefit from mature tree growth. The prevalent species of street tree is the Live Oak whose shallow root systems exacerbate sidewalk maintenance concerns in the Corridor.

Recent tree planting programs within the area have significantly increased the number of street trees. These efforts include:

- ☐ TX DOT tree planting on I-45 Corridor and Little White Oak Bayou
- ☐ Harris County Flood Control District demonstration project along Little White Oak Bayou
- ☐ Neighborhood initiatives along Irvington Blvd.

However, street furnishings such as benches, trash receptacles, recycle bins, bollards and bicycle racks are rarely visible within the Corridor today. METRO Bus Shelters exist at major intersections along the existing Bus Routes.

Pedestrian oriented lighting provides a safer and more attractive environment for night-time use of Pedestrian Realm areas, though this type of lighting rarely exist within the Corridor today. Pedestrian level lighting can be attached to bollard lights, pole lights at 11-14' heights and attached to building facades. Street lights can provide some sidewalk lighting although their purpose is to light roadways for automobile traffic.

Currently, street lights and a few attached fixtures to building facades provide the only ambient lighting along pedestrian walkways within the corridor. Pedestrian level lighting rarely exists within the corridor outside of the CBD and UofH/TSU areas.

Public Art

Public art adds an element of pride and interest to the pedestrian realm, such as the Vaquero Sculpture by Luis Jimenez in Moody Park.

MOCAH mural projects include:

- ☐ "World is in your hands" - Davis High School
- ☐ "Sky's the limit" - N. Main and Quitman St.
- ☐ "VERB – It's what you can do" - Marshall Middle School
- ☐ Mosaic Mural Project - ALTA Charter School

Mobility

Crosswalks - Demarcation of crosswalks at key intersections and mid-block areas provide safe and visible pedestrian crossings at public rights-of-way. The City of Houston's standard painted crosswalks exist at several signaled intersections along Fulton, Boundary and North Main Streets. Very few pedestrian crossing signals exist within the Corridor area.

Bikeways/Trails - Houston boasts an extensive Bikeway Program. This transportation network of designated bikeways is integrated into the overall transportation system and consists of a total of 345 miles of designated on-street and off-street bikeways. Several of these bikeways are located along Crosstimbers, Joyce, Cavalcade, Fulton and Burnett rights-of-way. However, currently, many sidewalks adjoining hike/bike trails are in disrepair.

Buses/Bus Shelter - Existing transit options within the North Corridor include METRO bus and private bus lines. The current METRO bus lines include express and local lines running between the following Transit Stations: Northline Transit Center, Eastwood Transit Center, Downtown Transit Center and the TMC Transit Center. Bus Lines running east/west within the Corridor include Crosstimbers-crosstown, Inner/Outer Loop-crosstown, El Sol-crosstown and Yale.

Bus Lines running north/south include Irvington, Northline, North Main, Fulton and Hardy.

The North Corridor is also home to several private bus lines with regular service to Mexico including Turimex LLC, Americanos USA LLC, Autobuses Lucano and Kerrville Bus Company.

Sidewalks leading to bus shelters and Transit Centers are also in need of maintenance and repair.



White Oak Bayou Trail



Service poles, bike lane and sidewalk condition south of the N IH 610



Development just south of the N IH 610



Service poles, bike lane and sidewalk condition along Fulton at Royder

B1.2.4 Engineering/Infrastructure Inventory

Existing Watermains

The typical life of a water transmission main is 40-50 years. For the North Corridor, research indicates that the lines including the Churchill Street Line and extending all the way to the intersection of Crosstimbers Street/ Fulton Street, have reached the end of their life span.

Existing Sanitary Sewer Lines

The life of a sewer line is typically 30 to 40 years, unless the lines are rehabilitated. From the City's GIMS database, it appears that there are several sewer lines that are older than 40 years. It is not clear if these lines have been rehabilitated. These include distinct segments along most of the length of the corridor. The construction dates for some segments are unknown.

Existing Storm Sewer Lines

Current City regulations require storm water detention for all new development. Hence, any new developments that are proposed will be required to design for storm water detention.

Existing Lighting

Currently along the proposed North Corridor, there is an existing continuous lighting system. The existing poles range from 20 to 25 feet in height and are mounted on breakaway bases that are founded on drilled shafts. Existing poles are spaced between 100 to 200 feet and are staggered on opposite sides of the road. Poles are

mounted behind the roadway curb at varying distances depending on site conditions. There is a short segment of Main Street between Daly Place and Burnett Street that does not have adequate lighting, especially under the railroad. It is assumed that existing lighting meets current City of Houston standards.

Summary

As in other Corridors, it is clear that redevelopment will occur over a long period of time. This allows time to replace older water mains and other services. The Transit Street itself is characterized with a combination of industrial, residential and commercial uses, which would normally have the capacities, needed for redevelopment. However, the condition of water mains and sewer lines appears to be quite old along this Corridor and replacement of these services should be contemplated as transit is being constructed. It is recommended that the condition assessment of sewer lines be done for sewers that are more than 30 years by closed circuit television inspection. Storm water provision should be considered early in the redevelopment process to insure that the proper capacity exists.

Socio-Economic Profile - North Corridor		
		% Share
Total Population	76,410	
Total Households	23,021	
Population Age Profile:		
Age 0 - 4	7,507	9.8%
Age 5 - 9	6,986	9.1%
Age 10 - 14	6,744	8.8%
Age 15 - 17	3,741	4.9%
Age 18 - 20	3,776	4.9%
Age 21 - 24	4,336	5.7%
Age 25 - 34	11,148	14.6%
Age 35 - 44	10,419	13.6%
Age 45 - 49	4,591	6.0%
Age 50 - 54	3,910	5.1%
Age 55 - 59	3,120	4.1%
Age 60 - 64	2,608	3.4%
Age 65 - 74	4,267	5.6%
Age 75 - 84	2,469	3.2%
Age 85+	788	1.0%
Median Age	29.6	
Average Age	32.3	
Household Size Profile:		
1 Person	5,175	22.5%
2 Person	5,033	21.9%
3 Person	3,768	16.4%
4 Person	3,300	14.3%
5 Person	2,508	10.9%
6 Person	1,514	6.6%
7+ Person	1,723	7.5%
Average Household Size	3.29	
Period of Housing Construction:		
Built 1999 to March 2005	1,231	4.8%
Built 1995 to 1998	766	3.0%
Built 1990 to 1994	423	1.6%
Built 1980 to 1989	2,110	8.2%
Built 1970 to 1979	4,130	16.0%
Built 1960 to 1969	5,367	20.8%
Built 1950 to 1959	5,736	22.3%
Built 1940 to 1949	3,704	14.4%
Built 1939 or Earlier	2,281	8.9%
Median Year Built	1962	
Owner Occupied Households	11,718	50.9%
Renter Occupied Households	11,303	49.1%
Household Income Range:		
< \$25,000	11,440	49.7%
\$25,000 - \$49,999	6,772	29.4%
\$50,000 - \$74,999	2,886	12.5%
\$75,000 - \$99,999	1,027	4.5%
\$100,000+	896	3.9%
Median Household Income	\$25,205	
Median Value of Owner-Occupied Dwellings		
	\$47,036	

Source: Claritas

B1.3

North Corridor
Demographic Market
Overview

Demographic Overview

The North Corridor area has a population of just over 76,000 persons. The dominant group is Hispanics, at 60%, followed by African Americans, at 31%. The median age level is 29.6 years old, which is the middle among the five Corridors being examined, which range from 27.7 to 34.9 years of age. Persons under the age of 25 account for a 43% share of the local population in the North Corridor, while persons aged 25 to 54 (prime income earning years) account for a 39% share of the total.

The average household size in the North Corridor is 3.29 persons, which places it in the middle among the Corridors in question, which range from 3.57 down to 2.18 persons per household. Households with 1 or 2 persons account for a 44% share of the total, while households of 5 or more persons account for a 25% share.

The North Corridor has among the oldest housing stock of the Corridors being examined. Homes built since 1990 account for just a 9% share of the total, while homes built pre-1970 represent a two-thirds share. This compares to an average of 14% and 56% share, respectively, for the total sample of housing across the five corridors. The rate of homeownership to rental tenure is roughly 50-50.

In examining household income levels, the North Corridor ranks at the bottom among the five corridors being examined. With a median household income level of approximately \$25,200, some 80% of area households have an income level of less than \$50,000 annually, and approximately one-half earn less than \$25,000 per year.

The median value of housing in the North Corridor is in the range of \$47,000, which ranks it as the lowest among the five corridors being analyzed. Over two-thirds of area households are valued at less than \$60,000, and approximately 92% are valued at less than \$100,000.

Neighborhood Description

The North Corridor is part of Study Area 3, analyzed as part of a Land Use and Demographic Profile prepared by the City's Planning and Development Department in 2003. The North Corridor itself principally comprises one neighbourhood: Northside Village. The following is a brief area description.

- Northside Village is immediately adjacent to Downtown, but because of a major rail yard on the community's southern edge, only two streets connect the two areas. It includes Lindale Park, with its large lots and more substantial homes; Moody Park, an important gathering place in the center of the community; and the Davis High School-Marshall Middle School-Carnegie Library complex.
- New residential units in the form of redevelopment or infill development are changing the character and cost of housing in the area. Nearly 90 acres of new residential development has occurred in the area. Both the Memorial Park and Greater Heights area have seen significant residential redevelopment, which is generally higher-end and higher-density. Memorial Park had the third highest number of single-family permits in the city.
- There was a substantial drop in the number of households making under \$25,000 per year and a huge increase (100%-260%) in the number of households making over \$50,000 a year. (This is likely due to residential redevelopment in the Heights and Memorial Park areas where high-end housing is being developed).

The following land use characteristics are identified for Study Area 3:

- Study Area 3 contains 23,504 acres, and is located in the northwest portion of Loop 610 extending north between the Hardy Toll Road and I-45.
- Single-family residential comprises the majority of this area at approximately 7,149 acres. Primarily, single-family residential units are located along T.C. Jester, in The Heights, in Near Northside, and in pockets towards the north of the study area. The trend from 1990 to 2000 shows minimal changes in the percentage of single-family use.
- Multi-family residential uses are scattered throughout the study area; a 7% (37.5 acres) increase is exhibited from 1990-2000. The majority of the multi-family lots are located towards the north of the study area.
- Commercial and Office land uses are primarily located along I-45, N. Main St., Airline Rd., Heights Blvd, N. Shepherd Dr. and Washington Ave. These parcels make up 7% (1,705 acres) of the area. Office uses increased 13% since 1990, centered largely towards the edge of Loop 610.
- Industrial land uses comprise 2,186 acres (19% increase from 1990) of the study area. The majority of industries are located along Hempstead, between I-610 and I-10.
- Public and Institutional uses show a 17% increase from 1990 and comprise 921 acres. Many areas that were undeveloped in 1990 changed to public/institutional by 2000. A significant tract is Memorial park along the southeastern most portion of Study Area 3.

- Transportation and Public Utilities make up only 182 acres (0.8%) of Study Area 3.
- Parks and Open Space data indicate a significant increase of land between 1990 and 2000 (1,395% – from 57.7 acres to 863.8 acres). However, the majority of this increase is attributed to a reclassification of others/mismatched code of the parks and open space category. For example, Buffalo Bayou, White Oak Bayou, and Little White Oak Bayou were reclassified from undeveloped to parks and open space, as well as the Police Memorial and Moody Park.
- Vacant and undeveloped land use also decreased significantly (22%) between 1990 and 2000. The size of this drop can be explained by the reclassification that occurred during this time period. The majority of the vacant land tracts are located in the northern section of Study Area 3.
- Roads make up 24% of the land area, higher than the citywide figure of 18%. Major highways include I-45, I-10, Loop 610, and the Hardy Toll Road.

Office Market

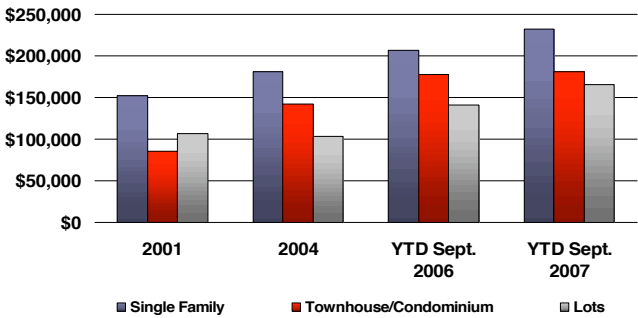
The North Corridor is not part of a major office node surveyed by Cushman & Wakefield. Please refer to the Houston Macro-Level Overview for market analysis.

Housing Market

The average single family house price was approximately \$232,400 for January to September 2007, based upon Multiple Listing Service (MLS) data provided by the Houston Association of Realtors. For the same period, the average townhouse/condominium sale price was close to \$181,600. These values have increased in the range of 30% since 2004.

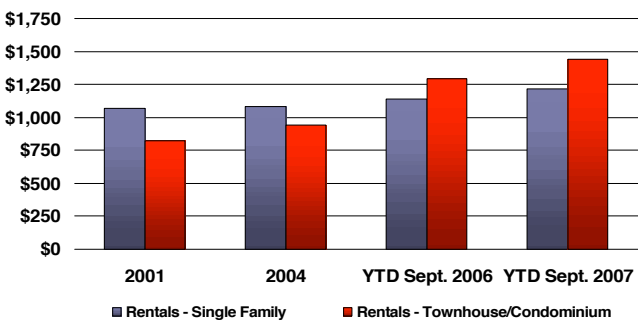
In the rental market, the single-family home rental rate was approximately \$1,220 per month in September 2007, compared to \$1,440 in the townhouse/condominium segment of the market. These rents reflect an increase of roughly 10% year-over-year.

Houston Association Of Realtors MLS Statistics
Average Price by Property Type
North Corridor- MLS District 9 (Central North)



Source: Real Estate Centre at Texas A&M University, Houston Association of Realtors
Note: Data shown is annual, other than for the current year (year-to-date March, 2007)

Houston Association Of Realtors MLS Statistics
Average Price (Lease Rate) by Property Type
North Corridor- MLS District 9 (Central North)



Source: Real Estate Centre at Texas A&M University, Houston Association of Realtors
Note: Data shown is annual, other than for the current year (year-to-date March, 2007)

B 1.4

Summary of Initiatives

The Initiatives Plan compiles and map initiatives, projects, and plans that have been prepared for lands in the study area. In addition, initiatives identified by participants in the workshop have been added.

A comprehensive picture emerges of the immense planning and development efforts undertaken in the Corridor to date, as well as the geographical relationship between the initiatives and the Transit Street and Stations. From a strategic stance, the Initiatives Plan provides a clearer sense of the location of priority areas within the Corridor and how future Transit Oriented Development objectives might be focused and positioned to build on existing initiatives and planning efforts.

Opportunity Areas

These locations identify sites that could be considered for redevelopment. Sites located along the Transit Street are suitable for intensification with transit supportive uses. These locations were identified by the workshop participants. In the North Corridor, many opportunity areas are existing as under-used industrial sites.

1. **Fulton St. and Rebecca St.**

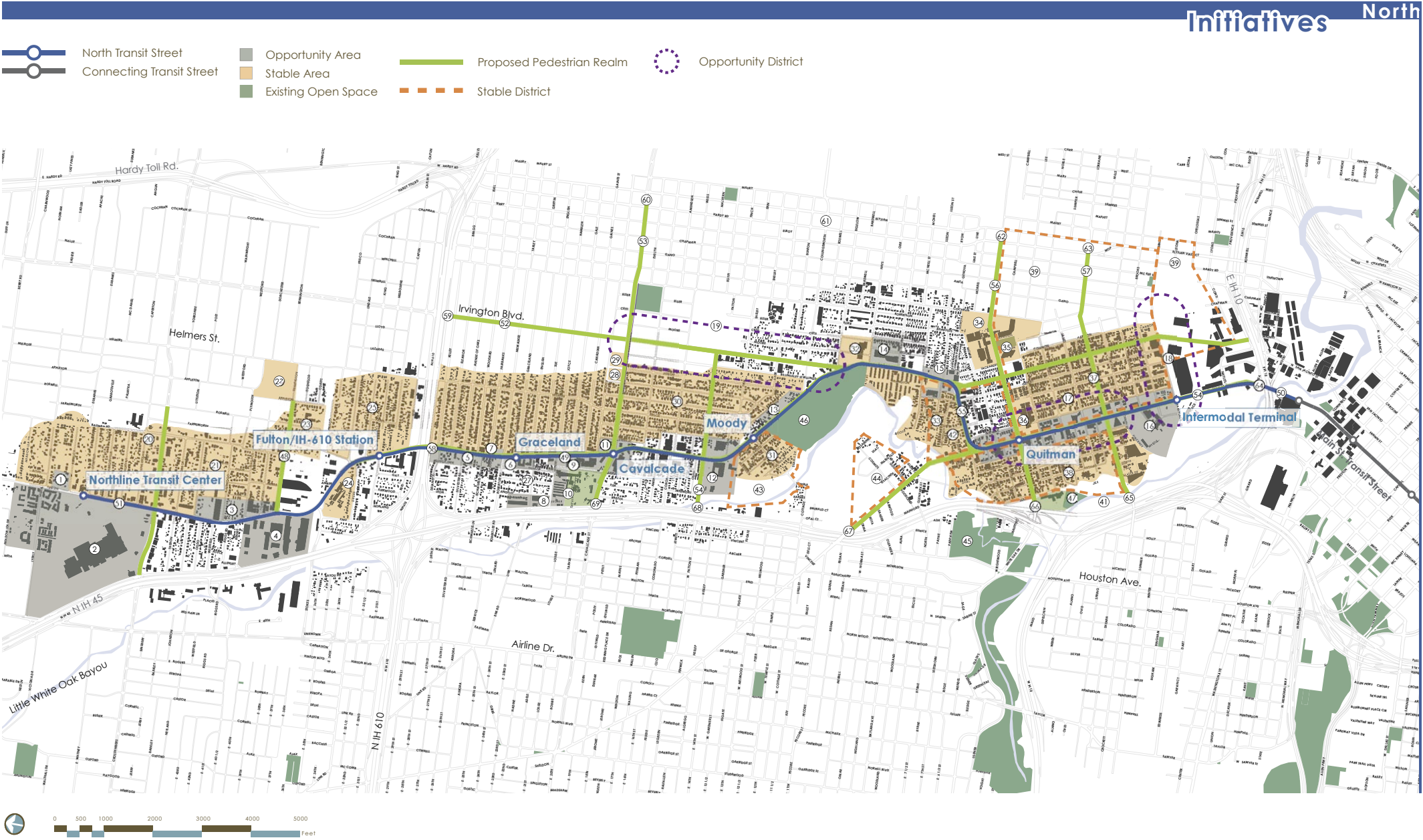
Adjacent to the Northline Transit Center is a vacant lot which was identified as an infill site during the North Corridor Workshop. Its proximity to the Northwest Transit Center makes it a prime location for redevelopment.

2. **Northline Mall and Houston Community Center**

The last station of the Transit Street is located at the existing Northline Mall and Houston Community Center. It is our understanding that the mall has plans to redevelop part of the site as large format retail. Also, the Houston Community Center has a proposal for a new building.

3. **Neyland St. and Bennington St.**

These industrial sites have been identified as opportunity areas for Transit Oriented Development.



- 4. **Bennie St. adjacent to the Roosevelt Elementary School**
This opportunity area is currently a large industrial site. Located on the Transit Street next to Roosevelt Elementary, this site should enhance its street-related uses and improve its pedestrian environment.
- 5. **Delaney St. and Robert Lee Rd.**
The sites along Fulton Street near Graceland Station are suitable for Transit Oriented Development that would complement the existing surrounding residential neighborhood.
- 6. **West of Graceland Station**
This site is within a 5 minute walk to the Station, making it a key opportunity area. The vacant public land is suited for a mixed use mid-rise building with commercial uses at grade.
- 7. **East of Graceland Station**
This vacant land is currently being used for billboard advertisement purposes. The proximity of this undeveloped site to the Station provides an opportunity to create a higher density mixed use development.

The following locations are industrial sites that have been identified as potential redevelopment. All of these lie within 5 minutes of a North Corridor Station.

- 8. **N IH 45 and Wynne St.**
- 9. **Wynne St. at Fulton St.**
- 10. **Wynne St. and Fulmer St.**

- 11. **Cavalcade Station**
Cavalcade Street is a major East-West road that crosses the Transit Street. This intersection has the potential to become a key mixed use development node along the North Corridor.
- 12. **Patton St. and Fulton St.**
South of Patton Street are two low-rise commercial developments which could be enhanced to provide at grade uses with higher density residential above. Residents would be seconds away from the Transit Street and the Freeway to the west.
- 13. **Moody Station**
The land adjacent to Moody Station offers potential opportunity areas. Change is already occurring in the area across from Moody Park - Avenue Community Development Corporation is advertising a new housing development.
- 14. **Hays St. and Halpern St.**
The vacant strip mall previously leased by a Walgreens pharmacy is a large site facing a dense residential community. This site would be suitable for pedestrian-oriented development that complement the adjacent neighborhoods.
- 15. **Panama St. and Fulton St.**
If reconfigured, this commercial plaza could improve the pedestrian realm by minimizing the setback between Fulton Street and the development.
- 16. **West of Transit Street along North Main St.**
Opportunity areas exist west of the Transit Street between Boundary and Burnett Streets. Small segments of this street have buildings aligned close to the sidewalk, but the street wall is generally disjointed due to vacant sites and large surface parking lots.

Retail Development Centers:

The Near Northside Economic Revitalization Plan identified locations ripe for redevelopment of new retail centers by capitalizing on opportunities for mixed use Transit Oriented Development.

- 17. North Main St. at Quitman St.
- 18. North Main St. at the Hardy Rail Yard
- 19. Irvington Blvd between Hays St. and Cavalcade St

Stable Areas

Workshop participants identified many neighborhoods, open spaces, schools and employment areas as Stable Areas. It is important to protect and enhance employment areas close to the Transit Stations so that employees can conveniently and safely walk to and from the stations. Neighborhoods will need to assess the opportunities that result from change, especially at their edges that abut the Transit Line or stations. Safe and convenient pedestrian connections to the Transit Line will encourage ridership and help to support the new retail and service uses that may develop near the stations. The following areas were identified as Stable Areas by workshop participants.

- 20. Bennington St. to Meadow Lea Dr.
- 21. Melrose Neighborhood
- 22. Herrea Elementary School
- 23. Donlen St. to Appleton St.
- 24. Roosevelt Elementary School
- 25. North Lindale Neighborhood
- 26. Robert Lee Rd to Wynne St.
- 27. Jefferson Elementary School
- 28. 2nd Christian Church
- 29. YMCA
- 30. North Central Civic Club
- 31. Silverdale Neighborhood
- 32. Martinez Elementary
- 33. Moody Park and Quitman

- 34. Davis High School
- 35. Carnegie Library
- 36. Ketelson Elementary
- 37. Near Northside
- 38. Lindale Park Neighborhood

Historic Districts:
The Northside Village Revitalization Plan identifies potential historic preservation strategies for six districts.

- 39. **Historic District 1**
The boundaries of the largest district are: Quitman Street at north, Burnett Street at south, North Main Street at west and Elysian Street at east.
- 40. **Historic District 2**
This industrial area includes the Southern Pacific Rail Shop buildings. The boundaries are: Maury Street at east, Burnett Street at north, Chestnut Street at west and Opelousas Street at south.
- 41. **Historic District 3**
The East Germantown boundaries are: White Oak Bayou at north, Hogan Street at south, IH 45 at west and North Main to Quitman Street and Keene to Hogan Street at east.
- 42. **Historic District 4**
The historic residential district is defined by: Wilkes Street at north, Quitman Street at south, Fulton Street at west and North Main Street at east.
- 43. **Historic District 5**
The Silverdale District is mostly owner-occupied modest bungalows and cottages. The boundaries are Fulton Street at North, Little White Oak Bayou at south, Moody Park at east and the property line of the existing trucking service business at northwest.
- 44. **Historic District 6**
The Glen Park District is composed of early 20th century bungalows and cottages built on a bluff between North Main Street and Little White Oak Bayou.

Pedestrian Realm

The North Corridor has several neighborhood, community, and city scale parks and open spaces. Workshop participants identified several initiatives for open space, streetscape and corridor enhancements.

Existing Parks:

The protection and enhancement of existing parks is crucial to the pedestrian realm. Enhancements could include landscape upgrading, improved pedestrian and cycling access and upgraded facilities.

- 45. Woodland Park
- 46. Moody Park
- 47. Hogg Park

Potential Streetscape:

The Near Northside Revitalization Plan identifies potential walkable commercial corridors where retail and services are on a neighborhood scale. These corridors provide connections to adjacent neighborhoods and walking/biking trails. They are to be designed to create a pleasant environment for pedestrians and cyclists. Improvements could include street planting, safe and connected sidewalks, pedestrian scale lighting and amenities such as benches, trash receptacles and transit shelters.

- 48. Bennington St.
- 49. Wynne St. at Fulton St.
- 50. North Main St.
- 51. Fulton St.
- 52. Irvington St.
- 53. Cavalcade St.
- 54. Patton St.
- 55. Boundary St.
- 56. Quitman St.
- 57. Hogan St.

Potential Gateways:

The Near Northside Revitalization Plan has identified significant entry points to strengthen the community identity. Gateways could include signage, landscape treatment or special buildings.

- 58. Fulton St. at Highway 610
- 59. Irvington St. at Highway 610
- 60. Cavalcade St. at Hardy Rd
- 61. Quitman St. at Hardy Rd
- 62. Cavalcade St. at Hardy Rd
- 63. Lorraine St. at Hardy Rd
- 64. N. Main St. at Highway 10
- 65. Hogan St. at Highway 45
- 66. Quitman at Highway 45
- 67. N. Main St. at Highway 45
- 68. Patton St. at Highway 45
- 69. Cavalcade St. at IH 45

B 1.5

North Corridor Workshop

A two day workshop was held in April 2007 to engage area stakeholders and residents in Urban Corridor Planning.

The purpose of the first day of the workshop was to establish a common understanding of existing conditions and opportunities in the Corridor. During the day, the consulting team met with representatives of City staff, and major landowners, to review the understanding of the context of the Corridor. During the evening session with the public, following a presentation on our understanding of the context, participants were asked to identify projects or initiatives that would enhance the area, as well as to help identify areas that could change and those that should be protected. As background, the Current Initiatives plan was presented at the workshop. It was a compilation of projects identified in previous strategies, plans and reports (see Chapter B1.2)

Each one of the table groups identified many opportunities in the North Corridor that have been included in the Initiatives Plan (see Chapter B1.3). A summary of comments made by participants follows:

General Concerns

- high-end residential development that might displace some of the residents.
- higher density buildings are inevitable; however, workshop participants would like architecture that would respect the history of the neighborhood.
- commercial developments like block-long drive through banks and large CVS-type drug stores on corner lots.

Public Realm Improvements

- need wider, safe sidewalks along the Transit Street
- sidewalks are needed on streets perpendicular to transit stations
- tree selection is key to prevent roots from destroying sidewalks
- need vegetation that requires less maintenance is needed along the Corridor
- need safe pedestrian crossings near the two schools at Quitman Station
- need traffic calming measures at Patton/Irvington and English/Helmets.
- maintain the bike path along Fulton
- connect Moody Park to Irvington Park by trail
- infrastructure needs improvement on Hogan Street and South Keene
- additional green space is desirable along the Corridor
- include bike racks along the Transit Street
- provide shade and lighting
- need more traffic lights along Fulton Street
- include public art

Evolution from workshop suggestions to report North

Pedestrian Realm



Existing Pedestrian Realm as presented at the workshop

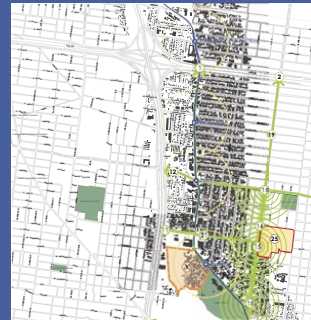


Potential Pedestrian Realm drawn during the 2-day workshop



Proposed Pedestrian Realm

Initiatives



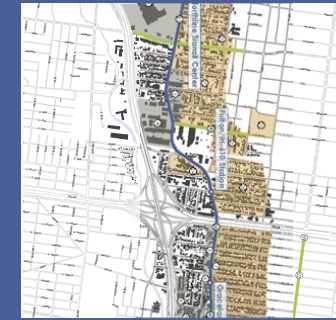
Current Initiatives as presented at the workshop



Sample workshop comments

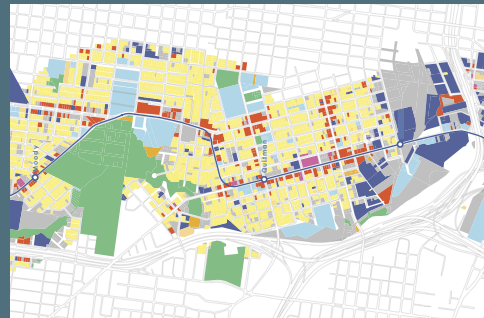


Summary of workshop Initiatives results



Summary of Initiatives

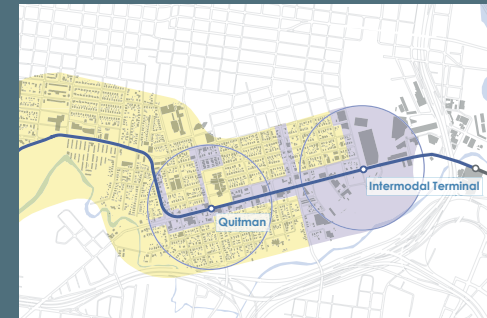
Land Development



Existing Land Use as presented at the workshop



Land Development Concept Plan produced during the workshop



Proposed Land Development Concept Plan



North Corridor table group discussion



Display boards regarding the North Corridor



North Corridor Workshop

Redevelopment Opportunities

- ☐ implement parking near Transit Stations
- ☐ land near the proposed Quitman and Burnett Transit Station
- ☐ new residential construction near Hogan Street
- ☐ potential for mixed residential and commercial development near Julia Street
- ☐ potential redevelopment between Crosstimbers and Rebecca
- ☐ Cavalcade and Fulton Street intersection
- ☐ the retail area south of the Boundary Street to the Burnett Station
- ☐ Northline Mall
- ☐ concentrate redevelopment on Transit Street

Areas to be protected

- ☐ between Highway 610, Cavalcade , Fulton and Robertson Streets
- ☐ between Link, Robert Lee, Fulton and Angelo
- ☐ Moody Park
- ☐ trees along the Transit Street
- ☐ historic buildings
- ☐ historic commercial style buildings
- ☐ the character of Lindale Park

Participants were also asked to write a headline for the front page of the Houston Chronicle in 2012. The headline was to reflect the character of the North Corridor once the Transit Street has been built. The facing page summarizes some of the headlines collected during this exercise.

Based on the input provided during the first workshop day, the preliminary Pedestrian Realm, Land Development Concept Plans, and three Demonstration Plans were developed and presented for discussion the next day.

The drawings on the previous page illustrate the input received at the workshop and the evolution to the report's Pedestrian Realm, Current Initiatives and Land Development Concept Plans (see Chapter B2 for proposed Plans).



Michigan Avenue, Chicago, OH



Riverwalk, San Antonio, TX



Vancouver, Canada

Go Green With Light Rail

Se los llevo el tren

New Life in North Corridor

Metro unifies North Corridor

Billionth rider boards METRO rail on the North Corridor

Business Booming, North residents pleased

BRT out LRT in !

These headlines were taken during the North Corridor Workshop



B2.1

The Combined Pedestrian Realm/Mobility/Land Development Concept Plan

The diagram on the facing page illustrates the combination of the Pedestrian Realm/Mobility Plan and the Development Concept Plan, which are described in detail in the sections that follow. The Urban Design Plan for the North Corridor illustrates broader elements of the Corridor that will eventually result in Transit Oriented Development and connections to the surrounding community.

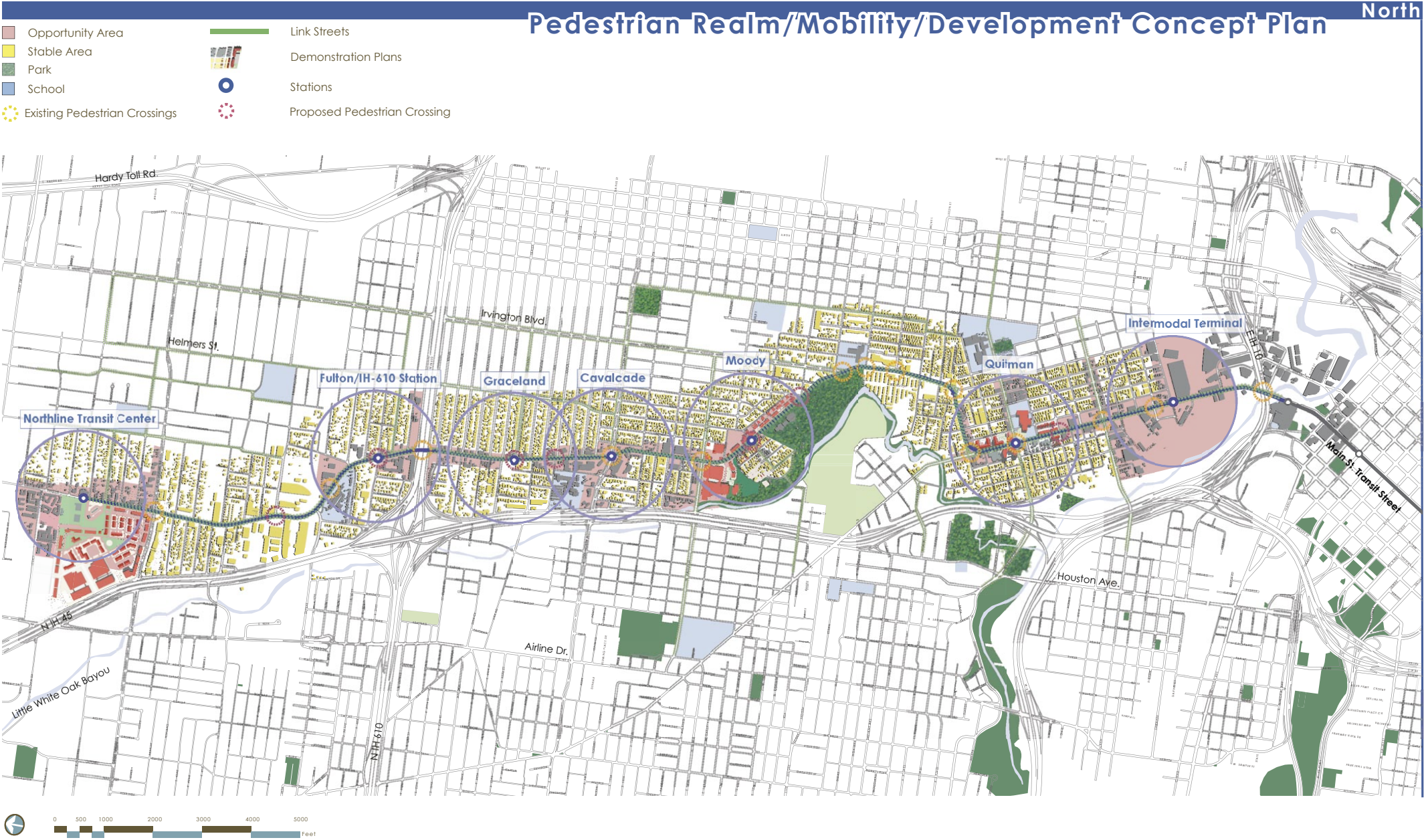
The Plan illustrates detailed areas that were developed during the workshop for the North Corridor, and identifies stable neighborhoods, located in proximity to the Transit Street that should be protected from redevelopment in the future.

The North Corridor is anchored with areas that lend themselves to redevelopment at a large scale with the Northline Mall to the north and the intermodal station to the south. The Urban Design Plan shows that the stretch of Main Street from the intermodal station to Boundary Street is appropriate for transit-oriented development. As illustrated in the demonstration plan for the Quitman Station, both sides of Main Street can be redeveloped into a combination of small, infill, mixed-use buildings as well as

large half block forms of development. The Community College offers the opportunity to redevelop with a major mixed-use complex. This area is appropriate for innovative housing over retail, as well as large format retail to support the intermodal station next to the new community college building.

Between the two major redevelopment areas, Fulton Street is a mix of low-density residential areas and industrial buildings. In this segment of the new transit line, most development will be incremental and of a scale that compliments the residential area. Most of this redevelopment will be 3-4 storey infill buildings and, on the larger industrial sites, through block developments.

Finally, the Plan highlights important connections to the Transit Street from the surrounding community. The Plan shows that major connecting streets such as Cavalcade, Quitman and even Crosstimbers should be developed with a strong pedestrian scale and landscape treatment to reinforce their importance as links to transit at the stations.



B2.2

Pedestrian Realm/ Mobility Plan

This Plan illustrates recommendations to improve and enhance the pedestrian realm and mobility conditions within the North Corridor. The goal of these recommendations is to provide a safe, vibrant, attractive and highly functional pedestrian experience along the North Corridor Transit Street (Fulton – Boundary – N. Main St.) adjacent to proposed Transit Stations/Transit Centers and along key connecting streets.

Beautiful, tree-lined, pedestrian focused streets are the framework of the Pedestrian Realm/Mobility Plan. Collector streets comprise the largest percentage of public space and as such must be enhanced and treated as important public places. When streets function well, they are lively places where cafes, corner flower shops, public art and gardens create vibrant outdoor spaces. They are the places where the eyes of the community are on the activities of the street, the frontage for development and the addresses of businesses.

Fulton/Boundary/North Main Streets comprise the main transit spine with key east/west connecting streets also identified for streetscape enhancements. The east/west connecting streets, such as Hogan, Quitman, Glen Park, East Cottage, West Patton, Graceland, Caplin, and Garrotsville Streets provide important links to adjacent

community destinations such as parks, schools, community facilities and trails. Additional north/south streets such as Bauman, Appleton, Helmers, Irvington and Robertson are also identified for streetscape enhancements to extend pedestrian links to and from the transit line to community facilities.

Streetscape enhancements should include street tree planting with the ambition to create a continuous pedestrian canopy. Street trees will clearly identify the important streets and public places and will provide shade to clear, wide, continuous sidewalks extending from back of curb to building fronts along the Transit Line Streets and connecting streets. In addition, pedestrian level lighting and street furnishings are appropriate on these streets.

Lighting along the Southeast Corridor Rail Line is recommended to be consolidated, as possible onto the catenary poles to be installed for the electrical service to the light rail cars. Both street lighting and pedestrian lighting can be attached to these catenary poles effectively. Consolidating lighting on these poles will avoid the visual clutter and expense of multiple poles.

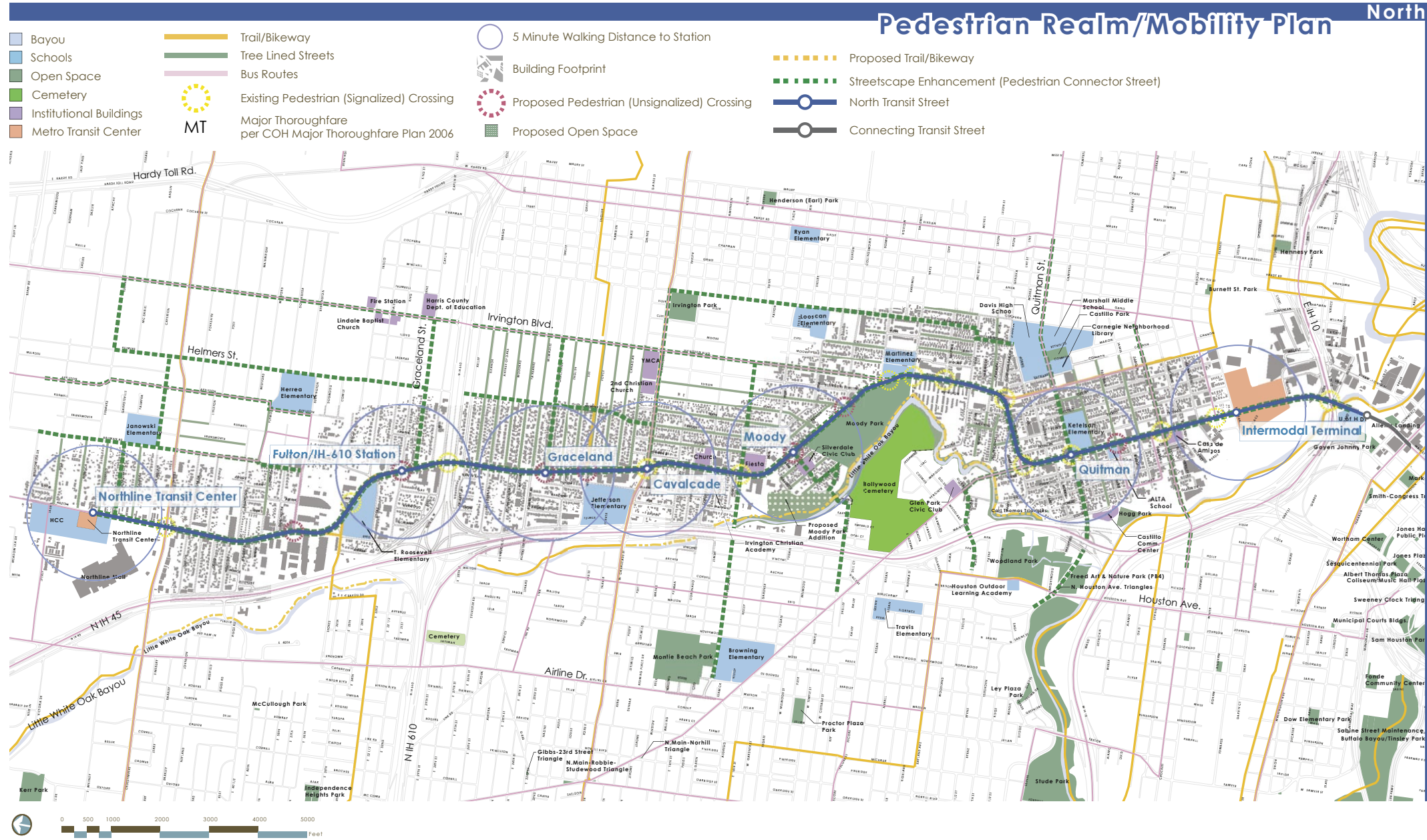
Ample pedestrian crosswalks are crucial to the perception of accessibility to both sides of the North Corridor Transit Line. Great care to provide safe, well-marked and unimpeded crossing opportunities especially within retail zones is critical. Bulb-outs reduce crossing distances and should be designed where on-street parking is proposed. Intersections along the Transit Corridor in need of crosswalk enhancements are at Bennington, Melbourne, Graceland, Joyce, Catherine and Paschal.

Current bike lanes serving the Southeast Corridor area should be connected to Transit Stations. These existing bike lanes are also recommended to be widened to AASHTO standards to improve their functionality and safety for bikers.

Moody Park, on Fulton Street, is ideally located to provide a key focal point and public space for the area. The fact that it is a regional park means that it can serve as an amenity for adjacent Transit Oriented Development.

Urban Squares are smaller scale publicly accessible open spaces that should be located in association with Transit Oriented Development. These small plazas are more urban in nature and do not include active/sports facilities. Urban Squares are generally accessible to public use, often privately owned and may be gated or well lit for night security. These squares are primarily paved with planting areas, shade trees, planters, public art, fountains and seating for passive, outdoor enjoyment.

The North Corridor boasts linkage to Stude Park/Woodland Park, a linear open space system along White Oak and Little White Oak Bayous. These urban Bayous provide canoeing, fishing, hiking and biking within densely vegetated areas. Future extensions of existing trails along Little White Oak Bayou are proposed by the City of Houston Parks and Recreation Department. These extended trails will connect the White Oak Bayou's Stude and Woodland Parks to Moody Park, White Oak Parkway and beyond.



B2.3

Land Development Concept Plan

The Land Development Concept Plan divides the North Corridor into two categories based on their development potential:

Development Opportunity Area 2 - Corridor

-- The Development Opportunity Area 2 is largely concentrated at the southern and northern ends of the Corridor. At the southern end of the Corridor, the Development Opportunity Area 2 comprises mainly older underdevelopment industrial and employment lands, while older retail commercial uses characterize the northern end of the Corridor.

In addition to these two concentrations, the Development Opportunity Area 2 flanks a large component of Corridor's length, covering a narrow portion (1/2 block depth) along the east and west sides of North Main Street and Fulton Street, existing Hike and Bike Trail which consists primarily of smaller scale commercial and retail uses. Development Opportunity Area 2 also extends along some of the east-west roadways east of North Main Street and Fulton Street where commercial and employment uses have encroached into Stable residential areas.

Stable Areas Stable Areas are comprised of the predominately residential neighborhoods and parks

along the length of the North Corridor. Stable Areas are those areas that are not likely to experience large scale redevelopment activity as a result of the planned Urban Corridor. Areas designated as Stable include existing stable residential neighborhoods, existing parks and open space as well as significant institutional uses both within and outside of the 1/4 mile stations radius.

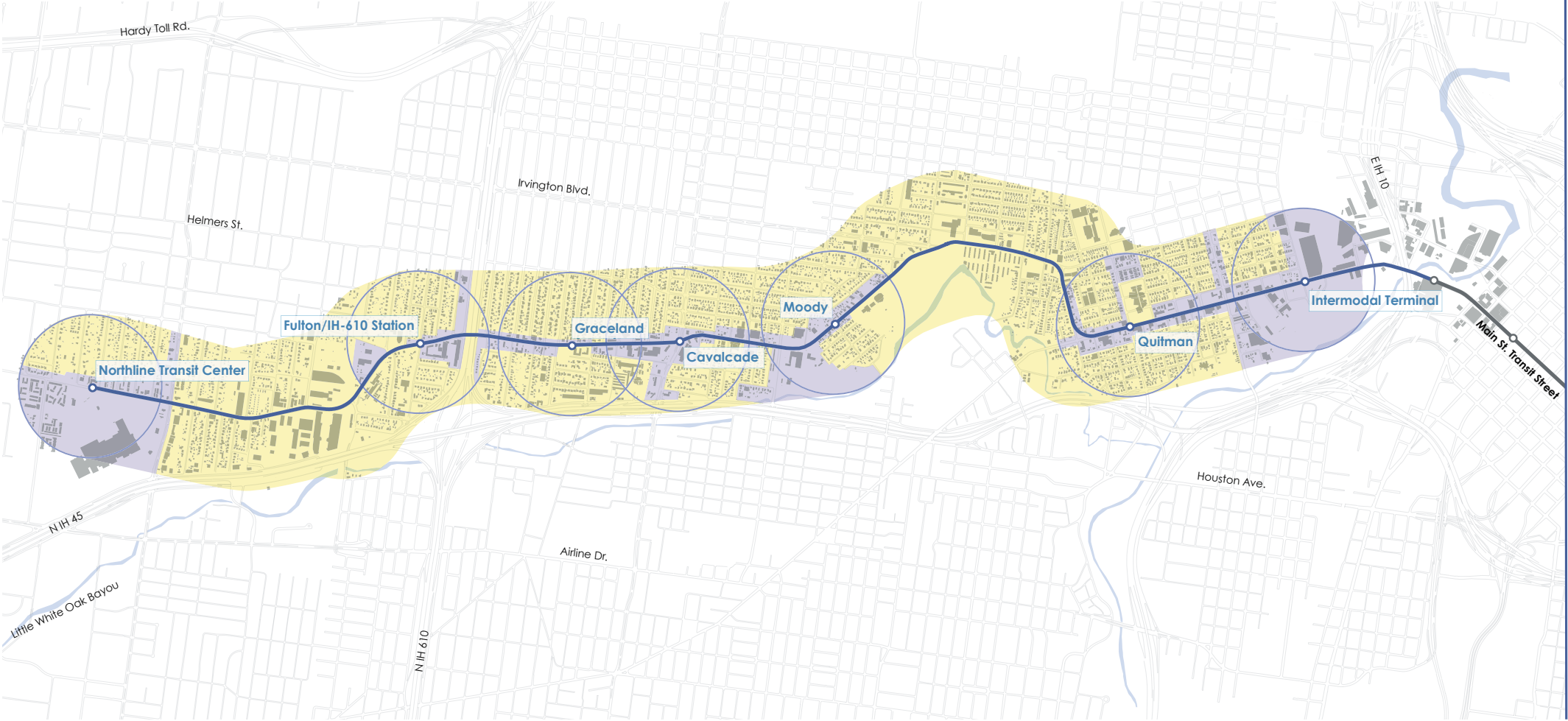
B2.3.1 Demonstration Plans

Three Demonstration Plans for prototypical sites were prepared to demonstrate conceptually how Transit Oriented Development could manifest itself given the context and condition of the North Corridor.

The following diagrams provide a collection of images including a site plan, photographs of development precedents and photo simulations of large lot redevelopment, a large lot with minimum frontage on the Transit Line and a large through lot.

Land Development Concept/Infrastructure Plan

- North Transit Street
- Connecting Transit Street
- 5 Minute Walking Distance to Station
- Development Opportunity Area 2 - Corridor
- Stable Areas



1 Large Through Lots

Northline Mall, North of Crosstimbers

Located on the East side of North Freeway, this site is the location of the existing Northline Mall. The site is an example of a large through lot prototype. An inter-modal transit station and a Houston Community College facility add to the dynamics of the site.



Existing Site Conditions



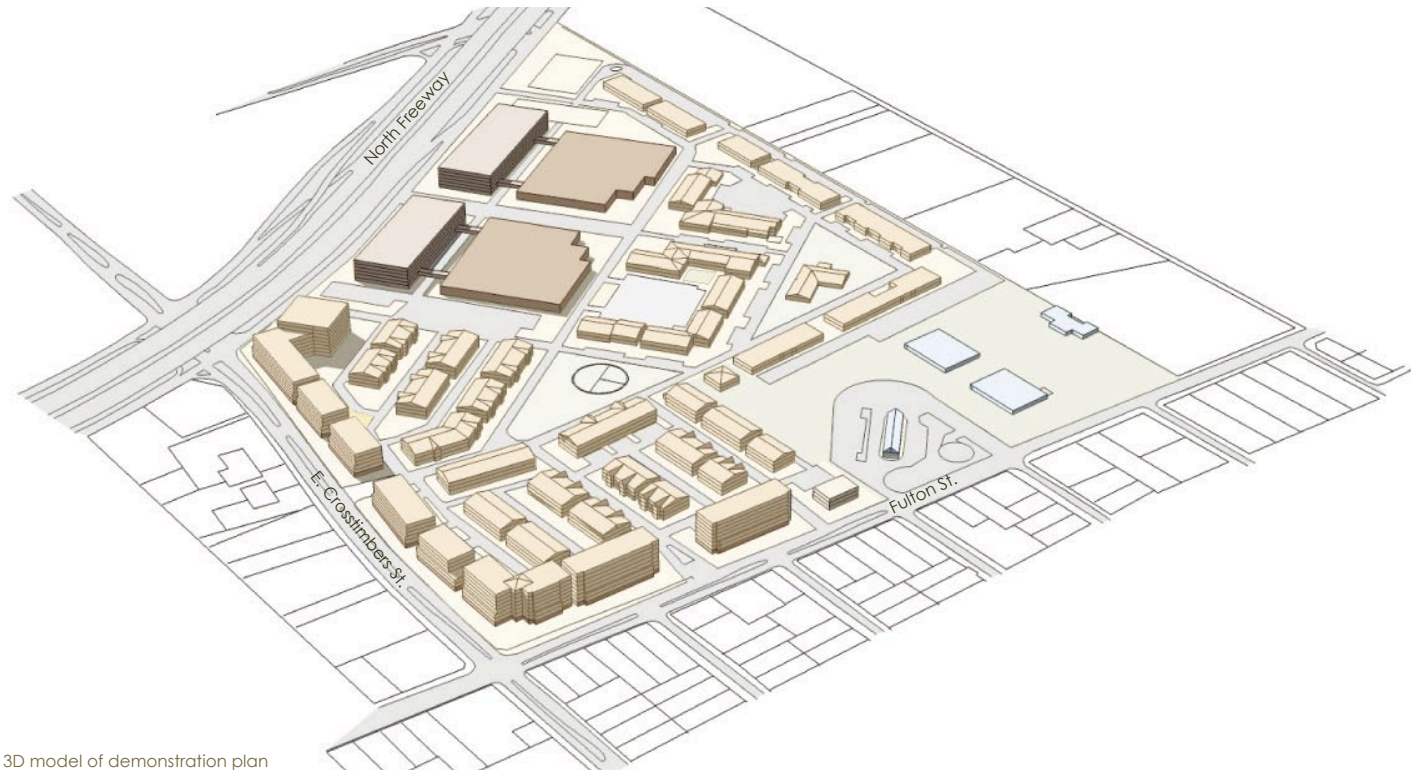
Location of site in corridor



Demonstration Plan created during the workshop

Site Characteristic	The Program	The Design Solution	The Results
<ul style="list-style-type: none">■ The site comprises approximately 3,385,855 sf of area (78 acres);■ the site has 2,594 linear feet of frontage on North Freeway, 1,385 linear feet on East Crosstimbers Street, and 951 linear feet on Fulton Street;■ a proposed transit station adjacent to the site;■ the area surrounding the site is a mix of residential, and commercial; and,■ this site lends itself to a mix of uses due to its scale and accessibility.	<ul style="list-style-type: none">■ The program for the site includes residential multi-family, single-family homes, residential over retail, 1-2 story retail, "big box" retail stores on both sides of the transit street.	<ul style="list-style-type: none">■ A site plan including mixed-use multi-family over retail and structured parking serving the mixed use development. The new development has been designed to create a retail village core surrounded by residential units resulting in a strong pedestrian environment.	<ul style="list-style-type: none">■ 951 linear feet of frontage on the Transit Corridor;■ 830 townhouses;■ two "box" retail stores at 218,427 sf along North Freeway;■ two large format retailers at 77,000 and 71,000 sf;■ two parking structures at 670,350 sf;■ 866 apartments, approximately 100 apartments in mixed-use buildings;■ 348,517 sf of retail along East Crosstimbers Street and Fulton St, residential units on the interior of the site and along Northline Mall.

Demonstration Plan North



3D model of demonstration plan



Photomontage illustrating the potential enhanced streetscape and built form surrounding Northline Mall



Precedent - apartments over at grade retail



Precedent - Mid-rise apartments



Precedent - Stores with pedestrian activity at grade

2 Large Site

Moody Station, North of the Park

This site is located on the south side of Patton Street. The site is an example of a large site prototype.



Existing Site Conditions



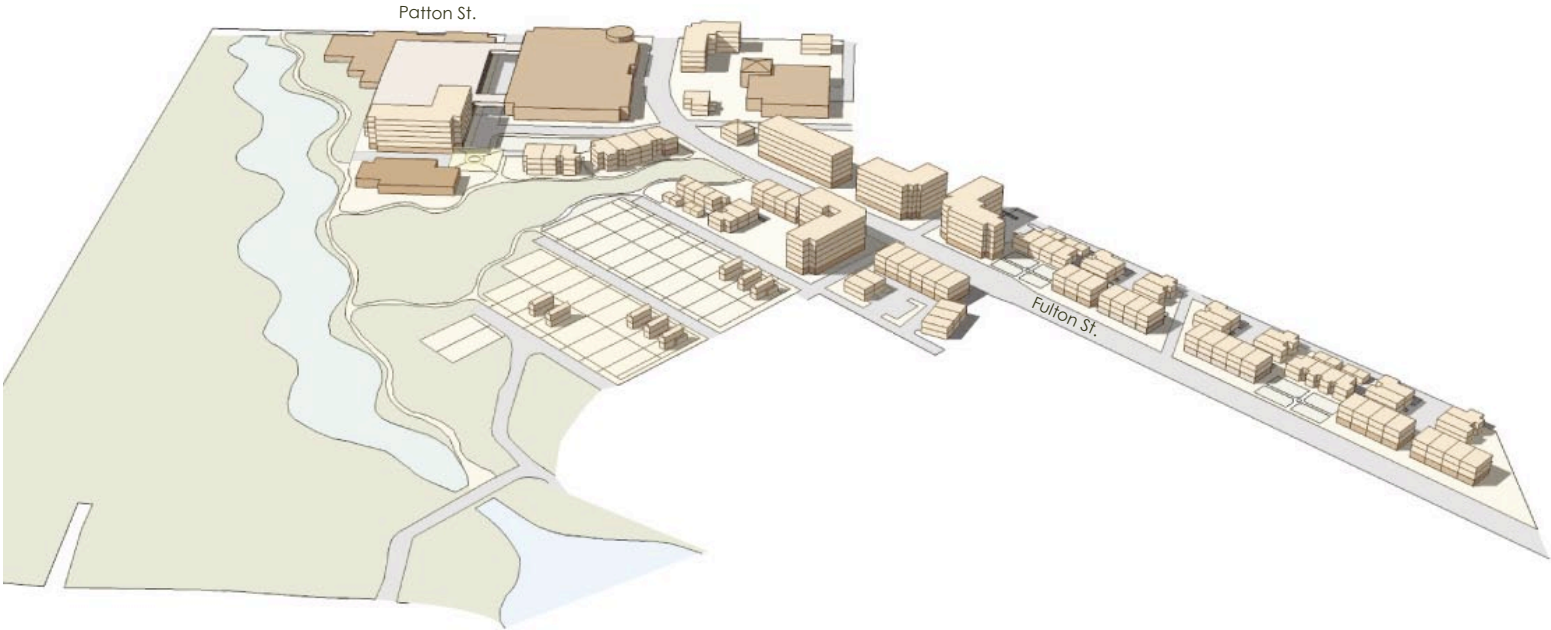
Location of site in corridor



Demonstration Plan created during the workshop

Site Characteristic	The Program	The Design Solution	The Results
<ul style="list-style-type: none">the site has 3,906 linear feet of frontage on Fulton St and 2,461 linear feet on Patton Street;the area surrounding the site is predominantly residential with some minor retail and vacant land; and,the south west edge of the site is formed by Moody Park.	<ul style="list-style-type: none">The program for the site includes multi-family and mixed use apartments, residential over retail, detached family homes and a "big box" retail store on both sides of the transit street.	<ul style="list-style-type: none">Mixed-use residential over retail along Fulton Street and development of parkettes to generate meeting places. A commercial edge with structured parking at the intersection of Patton Street with Fulton Street creating a gateway at the LRT station.	<ul style="list-style-type: none">Low-rise mixed-use buildings facing the parkland and providing urban edge on the east of Fulton Street;3,906 linear feet of frontage on the Transit Corridor;430 townhouses;380 live/work units;one "box" retail store at 256,095 sf;parking structures at 213,397 sf;443,214 sf of retail;934 apartments; and,single family homes 42 lots.

Demonstration Plan North



3D model of demonstration plan



Precedent - Low-rise apartments adjacent to 3-storey townhouses



Precedent - Retail framing the street corner



Precedent - Townhouses as suggested on plan

3 Large and 1/2 Lot Single Frontage

Quitman Station, South of Boundary

Quitman Station, from Boundary Street to Paschall Street. This site is an example of large single frontage and 1/2 lot single frontage developments.



Existing Site Conditions

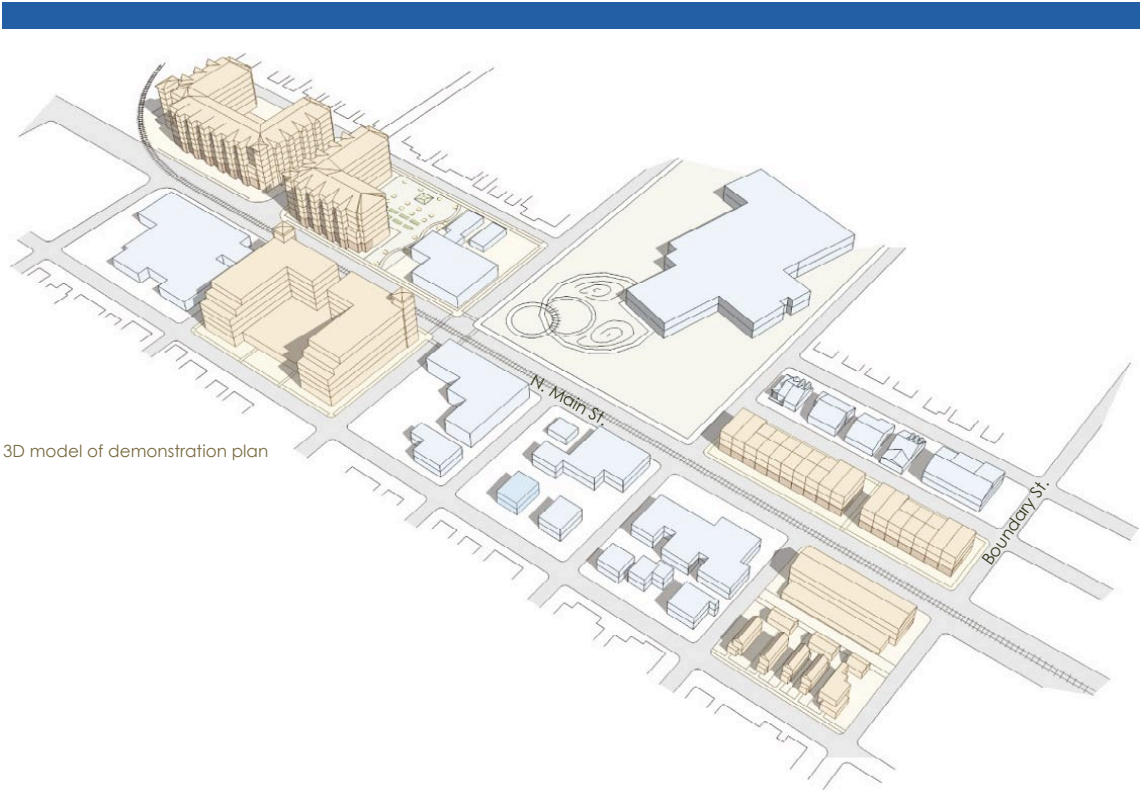


Location of site in corridor



Demonstration Plan created during the workshop

Site Characteristic	The Program	The Design Solution	The Results
<ul style="list-style-type: none">■ The site comprises approximately 296,349 sf of area (6.80 acres);■ the site has 1630 linear feet of frontage on North Main St; and,■ the area around the site is predominantly low rise residential with some retail.	<ul style="list-style-type: none">■ The program for the site includes multi-family and mixed use apartments, residential over retail, single family homes.	<ul style="list-style-type: none">■ Infill retail development and mixed-use adjacent to Harrisburg Boulevard;■ structured parking in later phases to allow for higher density mixed-use;■ development of a small public space on the north side directly across from a semi-public space on the south to produce a neighborhood focus; and,■ green connections to Gus Wortham Park adjacent to Sgt. Marcia.	<ul style="list-style-type: none">■ 1, 630 linear feet of frontage on the Transit Corridor;■ 58 live/work units;■ 56,506 sf of retail;■ 299 apartments; and,■ single family homes 5 lots.



3D model of demonstration plan



Photomontage illustrating the potential enhanced streetscape and built form surrounding Quitman Station

Demonstration Plan North



Precedent - Courtyard in a high density residential development



Precedent - Apartments over retail



Precedent - Apartments with at grade retail

B2.3.2

Development Analysis

The following analysis is intended to test underlying development economics in the North Corridor market context. The development proforma is generic in nature and not intended to represent specific site feasibilities. The form and scale of development, (an infill townhouse development site) is indicative of the type of transit-oriented development one would anticipate could emerge over time in this area. Office buildings, for example, are unlikely to drive denser development in this Corridor given the absence of an existing nearby office concentration.

Development Scenario 1

Infill Townhouse Project

Description of Development

A generic development proforma was prepared for a 48-unit, 3-storey townhouse project. The land area of the site measures 2 acres, and the units average 1,500 sf. There is one parking stall per unit, although additional surface parking may be available on a driveway, on-street parking or in a shared communal lot. The total development time horizon is 16 months from land acquisition to full occupancy. The proforma details are summarized on the following page.

Comparable Properties and Market Parameters

Two existing townhouse development projects were identified in proximity to the Burnett and Cavalcade transit stops within the North Corridor; one at 311 Hogan Street, and the other at 722 Redwing Place Drive. The Hogan Street townhouse unit was 1,400 sf, and had an asking price of \$198,000, while the Redwing Place townhouse unit was in excess of 1,750 sf and had an asking price of \$194,500. The prices for the two comparable projects are \$140 psf and \$110 psf, respectively. These projects are within a similar size range compared to the 1,500 sf units proposed in the development proforma illustrated below.

As outlined in the corridor overview above, based upon MLS data from the Houston Association of Realtors, the average resale townhouse/condominium price in the Central North MLS District 9 for the first nine months of 2007 was in the range of \$181,500. However, this region encompassed a large housing stock north of the inner-loop that was not included in the study area. It is estimated that average housing cost in proximity to the North Corridor is closer to \$200,000. In contrast, single family homes in the MLS were in the range of \$232,000 (generally older supply compared to the newer townhouse/condominium units that transacted).

Proforma Results

Understandably, the economic price required to justify new construction of townhouses in this area is within the range of current pricing at comparable projects, with land acquisition costs and construction costs projected near the

middle point of market range, producing a similar overall quality and character of building finish. The development proforma presented below suggests a required sale price of around \$183,000, or \$122 psf, compared to current asking prices for similar projects in the area in the \$110 to \$140 psf range. There may be a potential to upgrade the building materials and finishes (and corresponding price for the project) closer to the \$200,000 per unit range, or \$133 psf, depending upon the depth of market demand.

Some observations regarding the proforma for this type of project include the following:

- Hard construction costs (excluding parking) represent 47% of total project costs. The cost of parking accounts for an additional 5% of total end unit price. This represents a relatively small component since it is assumed the parking is at grade or structured underneath the units. Underground parking, although it can permit higher densities, results in considerably more cost.
- Total land costs represent roughly 24% of total end unit price – this represents land values of roughly \$900,000 per acre (\$25 per square foot buildable) plus some carrying costs. A more dense development, provided it can be successfully marketed, will generally achieve lower land costs per square foot, helping to reduce end unit prices (although for a different type of project – smaller unit sizes).
- Understandably, a developer needs to profit from any development at a rate consistent with the risk. Taking into account total project costs of approximately \$7.85 million and assuming a 12% profit margin on the total project (higher when leveraged equity is considered), the required sale price per unit is \$183,000 – translating to \$122 per square foot.

Economic Rent/Price Calculation- East Corridor Townhouse Residential North

Of note, the generic proforma outlined above can achieve relatively high densities (24 units per acre) and still provide, at least, one parking space per unit. If required, there may be an opportunity to design additional surface parking, either in front of each unit, on a street or some communal parking lot. A key consideration regarding the market feasibility for this type of development project is the potential demand generated by proximity to the transit corridor. There are clearly a number of cost-competitive housing options in this area. In order to entice existing or new residents to a new development in the North Corridor, the availability of enhanced public transit and associated mixed use development as an amenity will have to be emphasized. The ability to reduce car ownership may also assist with affordability if efficient public transit can be utilized.

Assumptions

<u>Timing Assumptions</u>				
Land Acquisition	01-Jan-08			
Planning Period	4 months			
Construction Commencement	03-May-08			
Construction Period	12 months			
Occupancy	01-May-09			
Total Development Period		16 months		
<u>Interest Rate</u>				
Interim Financing	7.00%			
<u>Building Areas</u>				
Number of Units	48			
Average Unit Size	1,500 sq.ft.			
Number of Storeys	3			
Ground Floor Coverage	24,000 sq.ft.			
Gross Building Area	72,000 sq.ft.			
Site Coverage	0.83 times			
Land Area	2.00 acres			
<u>Residential Units</u>				
	<u>G.B.A.</u>	<u>Avg. Size</u>	<u>G.F.A.</u>	<u>G.L.A.</u>
Bach & 1 Bedroom	0%	0	0	0
2 & 2+ Bedroom	100%	1,500	72,000	72,000
Other	0%	0	0	0
TOTAL	100%	1,500	72,000	72,000 sq.ft.
<u>Parking Ratio</u>				
1.0 stalls per residential unit				48 stalls

Project Costs

	<u>\$ 000's</u>	<u>Per Unit</u>
Land		
Purchase Price	\$1,800	\$37,500
Additional Land Costs	\$90	\$1,875
Land Carrying Costs	\$176	\$3,675
SUBTOTAL	\$2,066	\$43,050
Construction and Fringe		
Hard Construction Costs	\$4,052	\$84,414
Parking	\$467	\$9,719
Architect. & Engineer.	\$294	\$6,119
Site Improvements	\$261	\$5,445
Const. Contingency	\$226	\$4,707
Municipal Fees	\$11	\$235
Development Interest	\$26	\$542
SUBTOTAL	\$5,337	\$111,181
Sales and Marketing		
Sales Commissions	\$324	\$6,750
Marketing & Advertising	\$120	\$2,500
SUBTOTAL	\$444	\$9,250
TOTAL PROJECT COSTS		
	<u>\$7,847</u>	<u>\$163,481</u>
Required Price/Rent Calculations		
Required Return on Investment		
12%		
Required Average Sale Price		
\$183,099 Unit		

Conclusions Regarding Development Analysis

The above proforma analysis demonstrates the required sales price for a new infill townhouse development. When assessing this development proforma, it is important to note it reflects new building costs which generally exceed market affordability for many area residents. In the North Corridor, for example, the income levels (and corresponding homeownership affordability levels) and stock of single-detached housing available for resale places a considerable constraint on market demand.

The average price of existing homes in the Corridor is comparable to pricing required for many forms of new housing development. The average single detached house price in the North Corridor area was \$232,000 based upon year-to-date sales activity data provided by the Houston Association of Realtors. Based upon proforma results and market analysis of comparable properties, new townhouses require a sales price in the range of \$180,000 to \$200,000 (depending upon unit sizes), which is not far below the cost of a larger, single detached house on a relatively sizeable lot.

With a median household income of roughly \$25,200 across the North Corridor, the affordable house price, at the median, is roughly \$97,500, and the affordable monthly housing rent is \$670 – vastly below the types of prices or rents required to justify new construction. The affordability model incorporates a 6% interest rate, 30 year amortization, 20% down payment, and a calculation of

monthly principal, interest and taxes, with the assumption that 32% of gross monthly income can be dedicated to housing costs.

Of course, some new construction has, and will, continue to take place in this Corridor, catering to a subset of the existing and potential new residents who can afford and are seeking the lifestyle associated with transit oriented development. However, this appears to be only a small niche market at present.

The general inequities between economic feasibility and market pricing for higher density forms of housing suggest the following:

- Transit oriented development along the North Corridor is likely to be incremental. Substantial and broad market demand for transit oriented development will not appear overnight, even with new rapid transit along this corridor.
- New rapid transit along the corridor will likely increase demand, but higher density forms of housing (and subsequently commercial space demand) is likely to remain a niche market that appeals to users which have accepted (and can afford) a more urban housing lifestyle.
- In order to facilitate more rapid development of medium and higher density development along this Corridor, considerable “assistance” might have to be considered – perhaps in the form of financial subsidies for development or ongoing occupancy costs and reduced parking costs.

□ Lastly, although it is not explicitly examined in the proforma here, the availability of quality public schooling is clearly an important criterion within the City for attracting families to higher density forms of housing.

B 2.4

Infrastructure Overview

Based on the research of the existing North Corridor Infrastructure it appears that water mains are at the end of their lifespan for most of the length of the Corridor. Additionally, the dates of construction of the sanitary sewer lines suggests that there are segments along the corridor that have probably reached the end of their life span.

Given that the corridor is a mix of industrial and residential uses, the existing capacity is probably sufficient for redevelopment at higher intensities of use. However, the replacement of aging infrastructure should be carefully monitored.

Areas where new development will occur should be carefully analyzed to assess the increased capacity that might be required based upon the scale of development that is contemplated. Although development in the North Corridor will occur over a long period of time, consideration should be given to replacement of primary infrastructure as the new transit lines are constructed. At a minimum, careful analysis of services should be done within 1600 feet of a transit station.

It is hoped that a standard for lighting the streets and the pedestrian realm will be implemented throughout all of the corridors as the lines are being built.

B2.5

Pedestrian Oriented Cross Sections

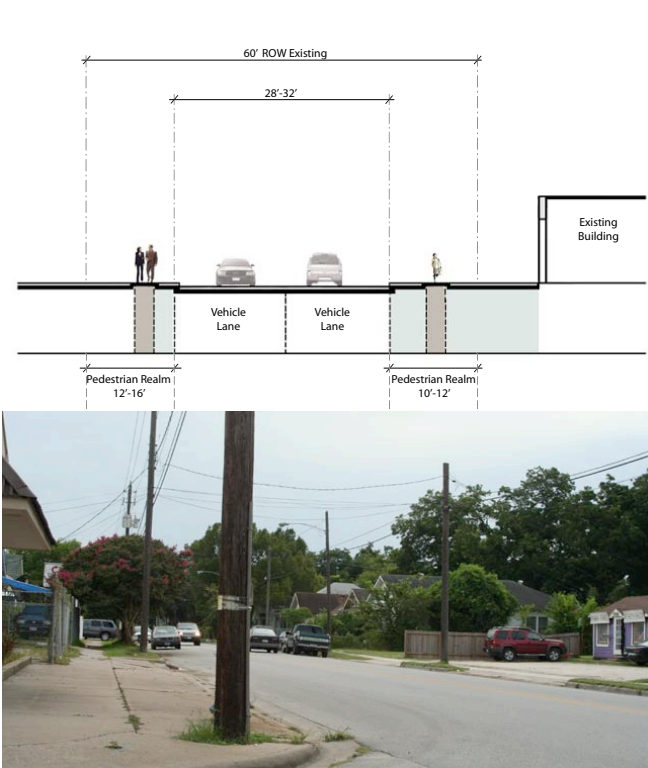
To better understand the urban design impact of the new transit on the existing streetscapes, sections have been developed through various locations along the ENorthCorridor illustrating the existing condition of the street from the face of buildings on each side. A section showing the new streetscape has been constructed as a comparison. The sections have been selected to indicate typical conditions of the Transit Street to show the impact of the LRT.

Additionally, sections have been developed to illustrate the existing and proposed improved pedestrian realm conditions of connecting streets. The importance of these streets as primary pedestrian ways cannot be overstated. These streets are envisioned as the principle links between the transit street and the surrounding neighborhoods as well as the location of bus routes.

B2.5.1

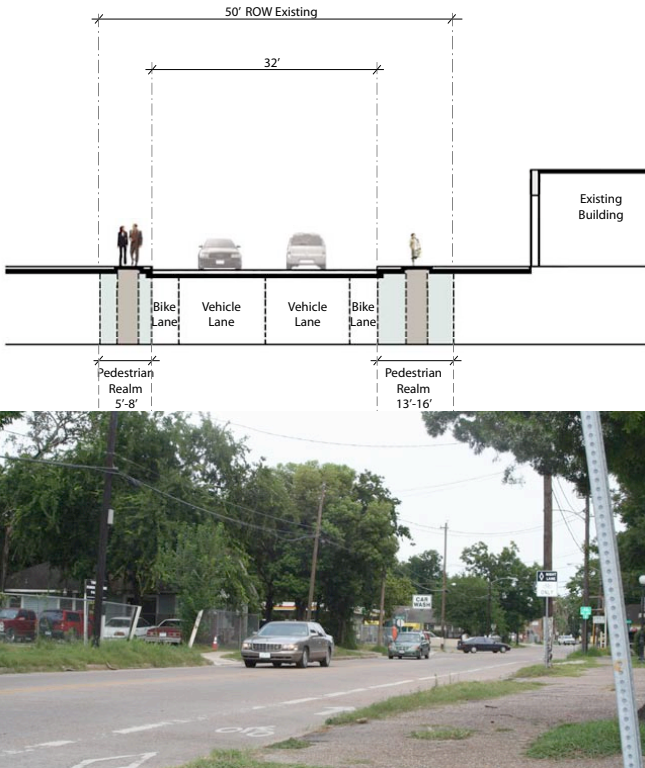
Pedestrian Character Transit Street

The Transit Street sections for the North Corridor have been taken at Boundary Street where it meets Gentry Street and Fulton Street at Irene Road. Both existing rights of way are narrow; therefore, accommodating transit, cars and the pedestrian realm is difficult.



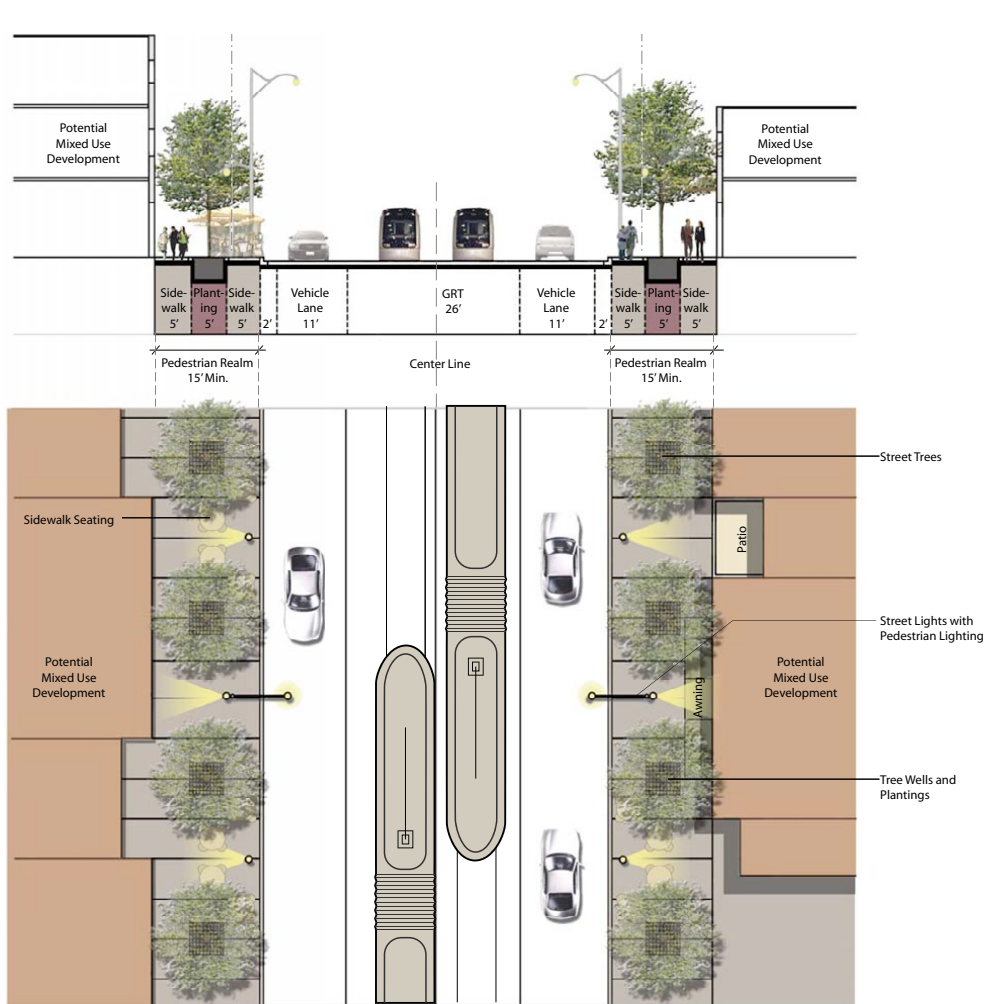
North Corridor Existing Section - Boundary St. at Gentry St.

The new section at both streets accommodates one lane of traffic in each direction with the transit at the center. The pedestrian realm is shown as a 15' wide zone that accommodates utilities, trees and sidewalks. Buildings are at the edge of the pedestrian realm and result in an urban cross section that is at a comfortable pedestrian scale.

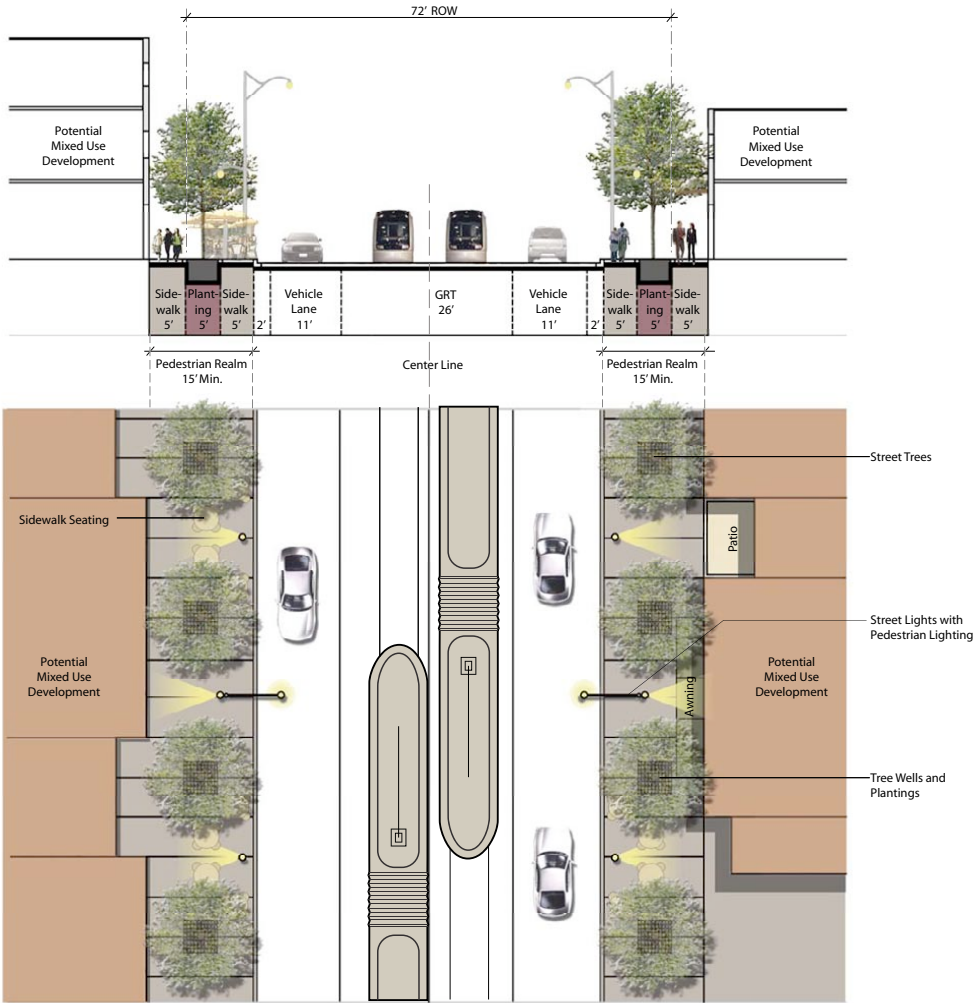


North Corridor Existing Section - Fulton St. at Irene Rd.

Pedestrian Character Transit Street, Offset Station Platforms North



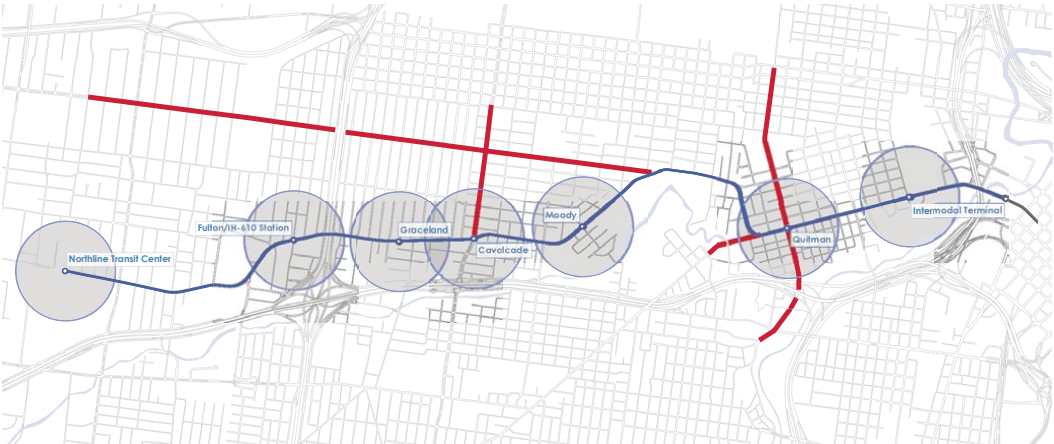
North Corridor Proposed Section - Boundary St. at Gentry St.



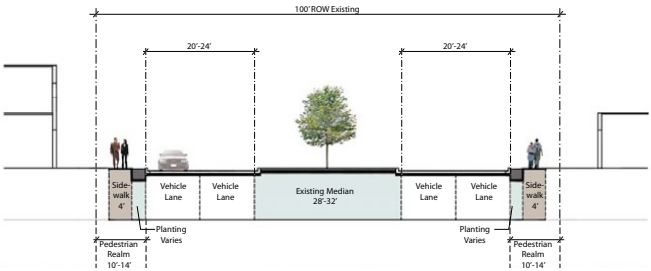
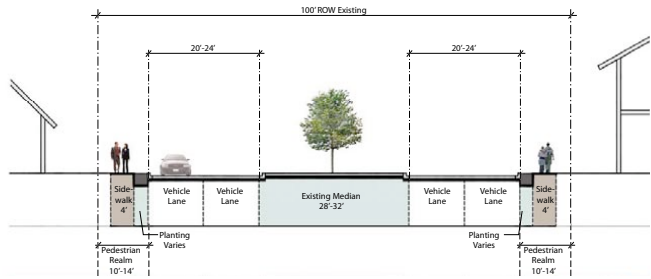
North Corridor Proposed Section - Fulton St. at Irene Rd.

B2.5.2
Pedestrian Character Major
Thoroughfare

Major Thoroughfare right-of-ways are typically 80 to 100 feet, and include 48 feet of pavement divided by a median of 14 to 32 feet. Rarely has a connected sidewalk system been provided. Mayor thoroughfares that intersect with the Transit Street have been identified as Pedestrian Character Major Thoroughfares because they have the potential to provide a crucial connection from area focal points neighborhoods and schools to Transit Stations. A continuous and connected sidewalk system been provided. A prototype street cross section indicates the following:



Pedestrian Character Major Thoroughfares

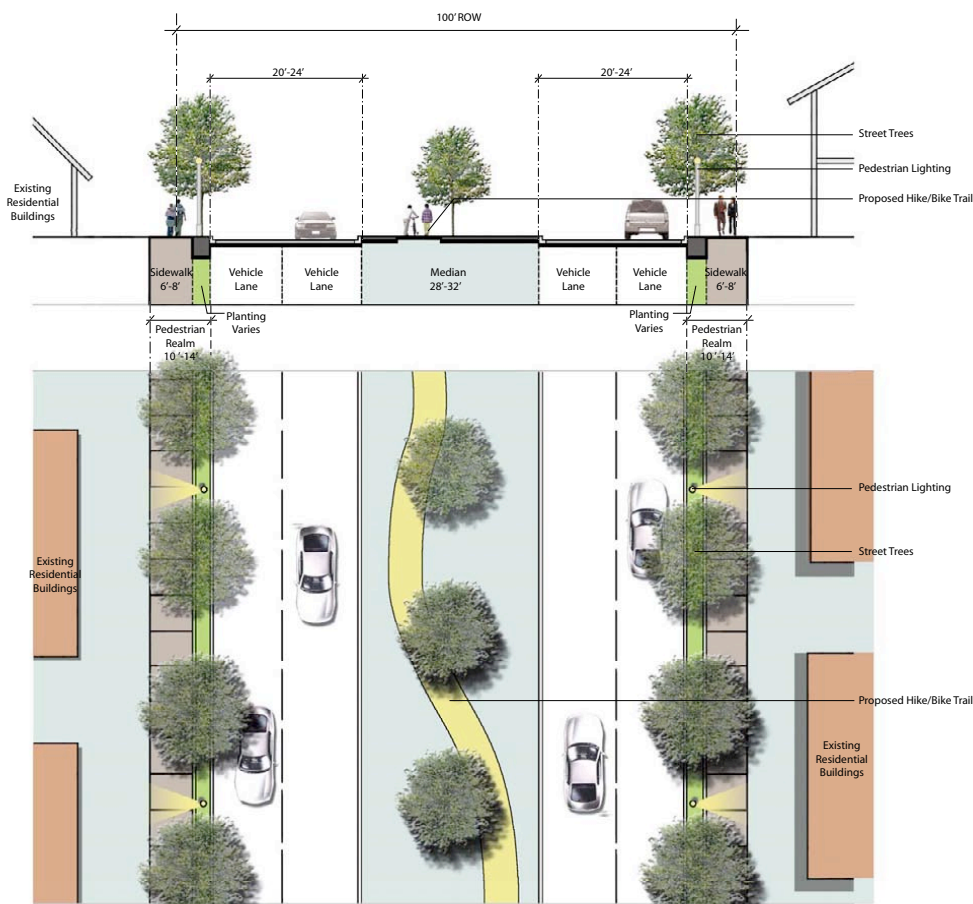


North Corridor Existing Conditions - Cavalcade St. - Residential Area

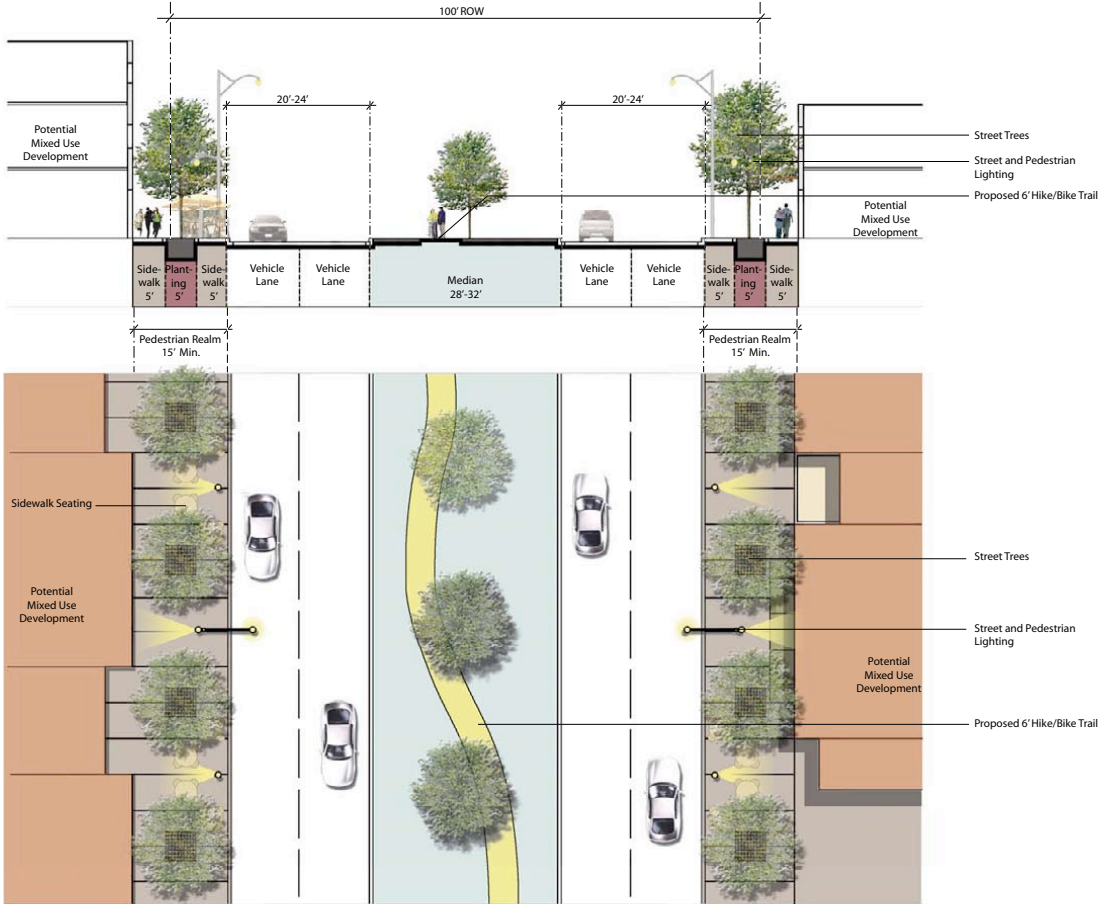


North Corridor Existing Conditions - Cavalcade St. - Commercial Area

Pedestrian Character Major Thoroughfare, Commercial North



North Corridor Proposed Section - 100' ROW - Cavalcade St. - Residential Area



North Corridor Proposed Section - Cavalcade St. - Commercial Area (only in designated redevelopment areas)

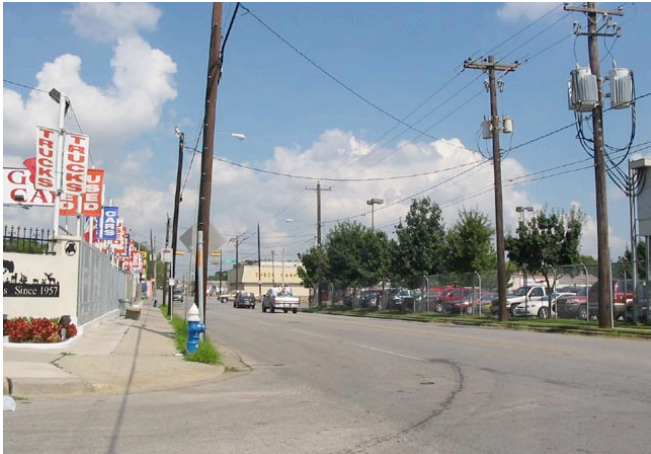
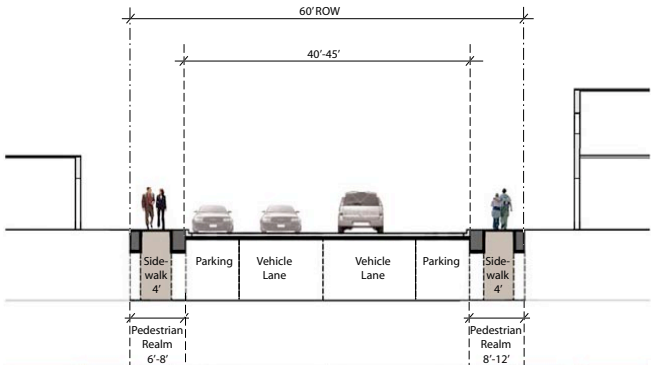
B2.5.3 Pedestrian Character Major Collector

Major Collectors range from 60 - 80 feet, and include 44 feet of pavement, and ditches on both sides. Rarely is a continuous and connected sidewalk provided. Hogan Street has been identified as a Pedestrian Character Major Collector because it is an important parallel street to the Transit Street and edge to neighborhoods. A prototype street cross section indicates the condition:

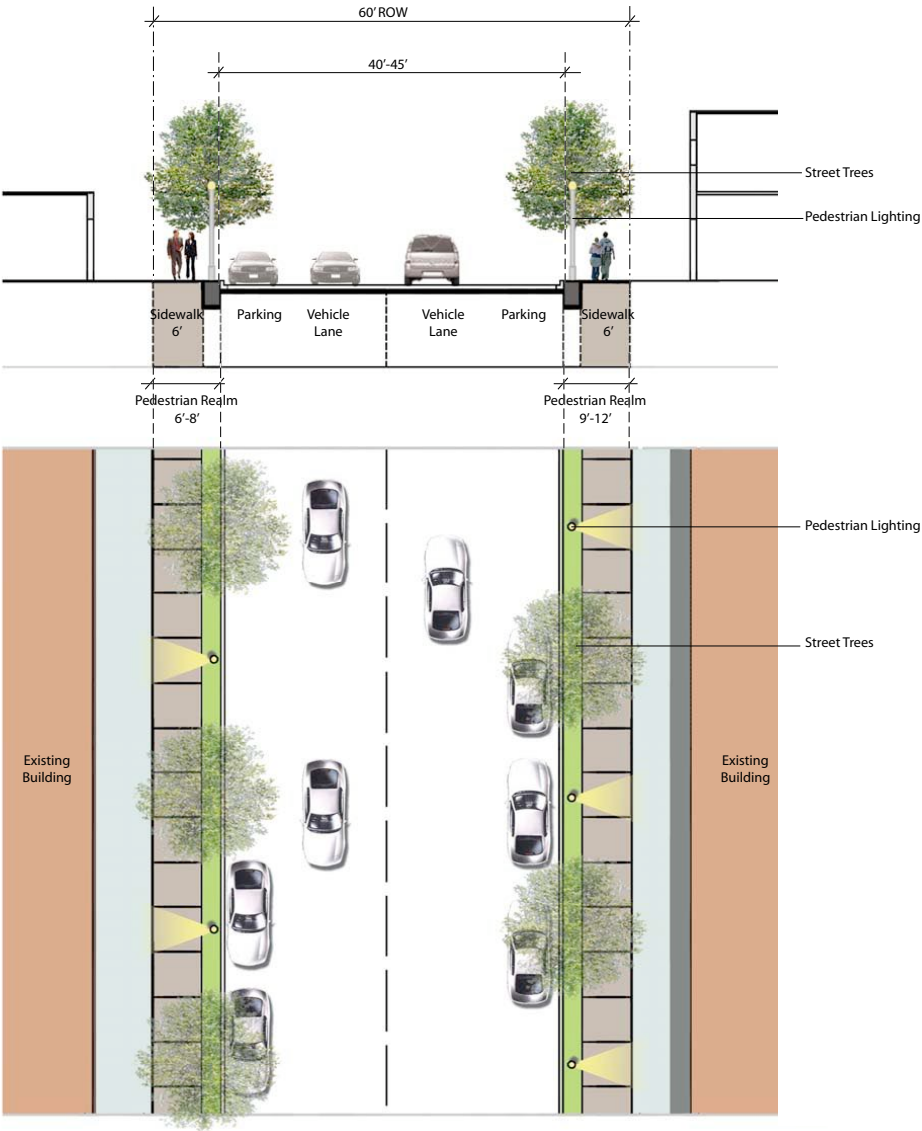


Pedestrian Character Major Collector

Pedestrian Character Major Collector North



North Corridor Existing Conditions - Hogan Street



North Corridor Proposed Section - Hogan Street

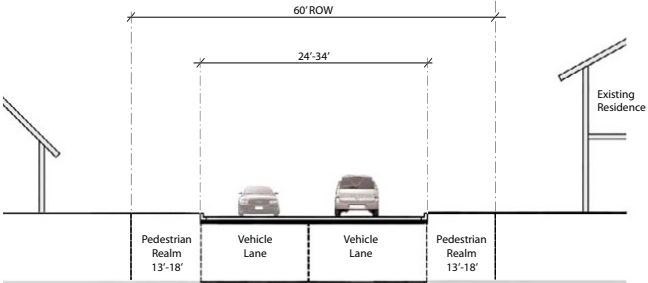
B2.5.4 Pedestrian Character Local Street

Local street right-of-ways are typically 60 feet, and include 22 feet of pavement. Some local streets have ditches on both sides. Rarely are sidewalks provided. Some local streets that intersect with the Transit Lines have been identified as Pedestrian Character Local Streets because they have the potential to provide a crucial connection between the transit stations and a local pedestrian traffic generator, such as a school, recreation center, public park or place of worship. A prototype street cross section for a Pedestrian Character Local Street with and without a ditch indicates the following:

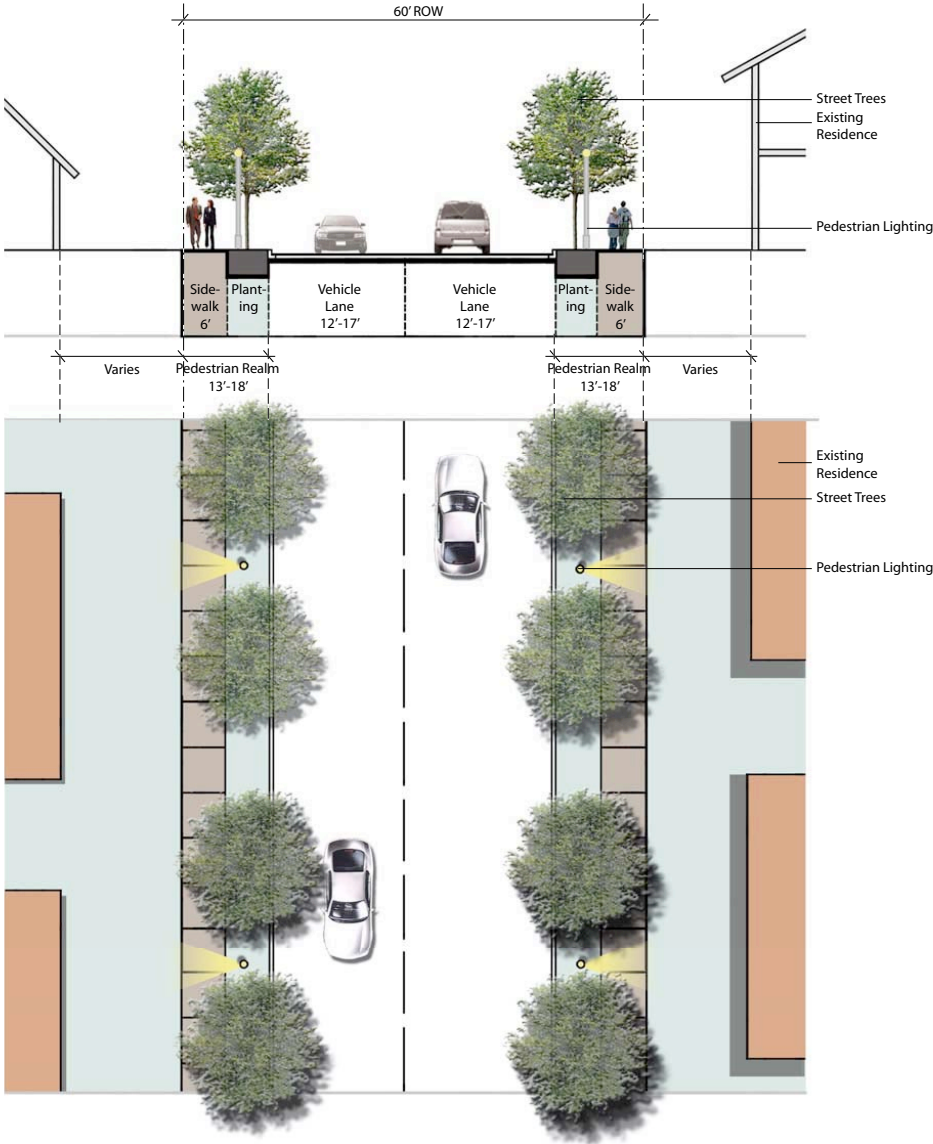


Pedestrian Character Local Street

Pedestrian Character Local Street Cross Section/Plan North



Local Street- Existing Section at Graceland Street



North Corridor Proposed Section - Graceland Street

Appendix

North Corridor
Implementation
Matrix

IMPLEMENTATION - DEVELOPMENT OPPORTUNITY AREA 2 - CORRIDOR

Statement of Application - applies on sites that about the Transit Street and are within 1/4 mile of a Transit Station

Key Implementation Terms:

Redevelopment – The removal of buildings or structures from land and the construction or erection of other buildings or structures therein or when the existing gross floor area on a parcel is increased by 25% or more through the construction of additions to existing buildings.

Grandfathering - Application of the Ordinance Requirements shall begin on the date that the Implementing Ordinance comes into effect. It applies to New Development (see definition of New Development). It does not apply to minor additions or improvements that are not defined as New Development.

New Development - New Development refers to both the Redevelopment of existing properties or the construction of new buildings or structures on previously undevelopment properties.

Variances - Variances to the Implementing Ordinance are subject to the current approvals process for variances of the City of Houston. Variances shall be approved by the City that meet the following three tests to the satisfaction of the City:

- 1. The variance is considered minor in nature.
- 2. The variance does not result in the achievement of a performance benefit, without achieving the basic density and urban design requirements of the Implementing Ordinance.
- 3. The variance assists in achieving new development that is appropriate for its context and does not create any undue adverse impact on adjacent development.

Mandatory Requirements – Mandatory requirements are those provisions that must be applied consistently on all new development in order to achieve the fundamental

Performance Based Standards – Performance Based Standards are incentive-based discretionary standards designed to encourage development that meets established development objectives. Achievement of performance based standards results in the reduction or dispensation of otherwise mandatory requirements.

Design Guidelines – Design Guidelines are discretionary standards to guide land development to achieve a desired level of quality for the physical environment.

Mandatory Requirements within Development Opportunity Area 2 - Corridor	
Pedestrian Realm	
1	A connected sidewalk system shall be provided on both sides of streets that have been identified as Pedestrian Character to facilitate access by pedestrians to the transit stations, adjacent businesses and local pedestrian traffic generators.
2	The City shall not accept cash-in-lieu of required street trees, unless a substantiated technical reason is provided that precludes street tree planting. Where cash-in-lieu of street trees is accepted, the monies received shall be utilized to enhance tree cover in a local public park, or along the Transit Street within 1/4 of a mile of the development site from which the cash-in-lieu of street trees was accepted.
3	All buildings, with the exception of street facing townhouse units, shall be developed with a substantial portion of their front and exterior side facades between 15 and 25 feet of the back-of-curb. It is understood that where a parcel has three sides abutting a public street, the build-within concept may not be achieved on the third side.
4	In all Transit Street Configurations, 15 feet from the back of curb is required for the Pedestrian Realm.
5	Where the rear yard or interior side yard of a Transit Oriented Development site abuts a single detached house, an angular plane shall be implemented to control the height of the building. The angular plane shall be established as follows:
6	a line from the abutting rear parcel line and/or the abutting interior side parcel line to be drawn to a point 10 feet above grade; then,
7	a 45 degree angle from the previous point into the development site shall establish the maximum height of buildings within the development site.
8	Within the identified Development Opportunity Area 2 - Corridor, street facing townhouses with no street facing garage shall ensure that the main front wall of the unit be built within 15 and 30 feet of the back-of-curb.
9	Where front garages are proposed, the main front wall of the building shall be built within 20 and 40 feet of the back of the curb.
10	In all cases within the identified Development Opportunity Area 2 - Corridor, the exterior side build-within zone for street townhouses shall be between 15 and 30 feet of the back edge of the curb.
11	In locations where the public street right-of-way is equal to, or greater than the required 15 feet, the build-within zone shall be established from the edge of the street right-of-way and shall be between 0 and 10 feet.
12	On corner parcels within the identified Development Opportunity Area 2 - Corridor, the exterior side yard shall also include a build-within zone located between 15 and 25 feet from the back edge of the curb, and the main exterior side wall shall occupy a minimum of 60 percent of the depth of the parcel, within the build-within zone.
13	All residential buildings with direct access to dwelling units from the street, shall be elevated a minimum of 2 feet 6 inches to provide privacy and a sense of entry to the unit. The maximum elevation from grade to the entrance landing shall be 5 feet.
14	On all lands fronting onto a public street, a Major Thoroughfare and/or a Major Collector, the minimum built frontage requirement shall be 75 percent of the parcel frontage and shall be occupied by the main front wall of a building within the build-within zone.
15	Notwithstanding the requirements for a minimum built frontage, where an urban square is provided abutting a front and/or exterior side parcel line, the frontage occupied by the urban square shall be counted toward the minimum built frontage requirement.

16	A minimum of 75 percent of the main front wall at grade and, on a corner parcel, exterior side wall at grade of any non-residential building shall consist of windows and entranceways that facilitate visibility into the building.
17	Accessible building design, streets and publicly accessible open spaces shall conform with the requirements of the American Disabilities Act.
18	Urban squares shall be built and maintained by the landowner, and an easement with the City shall ensure that the space is open and accessible to the public at all times, or as identified in the easement agreement.
Optional Performance Based Standards for Development Opportunity Area 2 - Corridor (non-mandatory)	
Applies on sites within 1/4 mile of a Transit Station and generates no undue adverse impact on the stability of the neighbourhood (to be defined)	
To utilize the following standards:	
Urban Squares	
19	There shall be no compensating open space requirement for any Transit Oriented Development. Urban Squares/Plazas shall be provided in accordance with section 5.3.2.
20	Notwithstanding that there is no requirement for compensating open space, all development applications on sites greater than .5 of an acre in size shall include a location for an urban square. Urban squares are intended as formal pedestrian spaces, in support of the adjacent higher density, mixed use development.
21	Lands shall be set aside for an urban square/plaza as follows:
	for all non-residential development, the land requirement for an urban square/plaza shall constitute a minimum of 2 percent of the net developable site area;
	for all primarily residential development (where more than 80 percent of the Gross Floor Area is residential), the land requirement for an urban square/plaza shall constitute a minimum of 4 percent of the net developable site area; or,
	for development that include a mix of land uses, where the secondary use comprises at least 20 percent of the Gross Floor Area, the land requirement for an urban square/plaza shall constitute a minimum of 2% of the net developable site area;
Parking	
22	For all retail and service commercial uses, including restaurants - a minimum of 2.0 and a maximum of 4.0 spaces/1,000 square feet of Gross Leaseable Floor Area.
23	For hotels/inns - a minimum of 1.0 and a maximum of 1.25 spaces per room.
24	For all office uses - a minimum of 2.0 and a maximum of 3.0 spaces/1,000 square feet of Gross Leaseable Floor Area.
25	For all condominium-based residential uses, a minimum of 1.0 and a maximum of 1.75 spaces per unit, inclusive of visitor parking.
26	For all fee simple residential uses – a minimum/maximum of 2.0 spaces per unit.
27	Where a public parking facility is developed, Transit Oriented Developments within 300 feet the City may reduce the minimum parking requirement, in recognition of the enhanced public parking supply. The reduction of the minimum parking requirement shall be determined by the City on a case-by-case basis.
28	Parking requirements for any individual development do not necessarily need to be provided on the same parcel, or on a parcel contiguous to the development. Required parking for any Transit Oriented Development may be provided on any parcel within 300 feet of the development that is being served by the parking facility.
29	Where a Transit Oriented Development is unable, or does not wish to provide all of the required parking spaces, the City may accept cash-in-lieu of the parking spaces. The minimum parking requirement shall be used to calculate any parking space deficiency. The cost of each parking space shall be established by the City, and may be waived for any specific development, at the discretion of the City. The funds raised through this provision shall be utilized by the City's Parking Authority solely for the purchase of property for public parking and/or the building of public parking structures in proximity to the Transit Street where the fees were collected.
All of the following must be achieved:	
Development Blocks	
30	For all large scale Transit Oriented Development projects (defined as projects on development blocks or parcels that are greater than 5 acres in size), the maximum development block or parcel size shall be approximately 5 acres in area. In all cases, there shall be no minimum development block or parcel area.
31	No development block or parcel frontage on a street shall exceed 600 feet. In all cases, the minimum development block or parcel frontage shall be 25 feet.
32	Large scale Transit Oriented Development projects shall provide public streets, or publicly accessible private streets, to subdivide any development block or parcel greater than 5 acres in size into smaller development blocks or parcels in accordance with this policy.
Buildings	
33	The minimum density for any Transit Oriented Development project shall be a Floor Area Ratio of 1.00.
34	There shall be no specified maximum density.
35	The minimum height for any Transit Oriented Development building shall be 2 storeys, or 18 feet, whichever is greater. Buildings on corner sites shall be a minimum of 3 storeys, or 27 feet, whichever is greater.
36	Where any Transit Oriented Development building abuts a street, the building height shall be established as follows:
	the main front wall and/or exterior side wall shall be permitted up to 3 storeys (or 27 feet, whichever is greater) within the corresponding build-within zone; and,
	for any main front wall and/or exterior side wall above 3 storeys (or 27 feet, whichever is greater), the building shall be stepped back from the main front wall and/or the exterior side wall of the base building by a minimum of 5 feet.
37	There shall be no specific height limit.
38	Buildings of up to 3 storeys may be built with zero setbacks to interior side parcel lines. Exterior side yards shall conform to the described build-within zones.
39	Buildings above 3 storeys may include a zero interior side yard setback for the base building of 3 storeys, but building side walls must be set back a minimum of 10 feet from the interior side yards for that component of the building above 3 storeys.
40	In all cases, the minimum rear yard setback shall be 14 feet to facilitate a potential lane access and/or a utilities easement.

Encroachments	
41	Temporary encroachments (i.e. awnings), may be permitted to encroach into the pedestrian realm subject to approval of a Temporary Encroachment Permit from the City.
42	Outdoor cafes and seating for restaurants may be permitted to encroach into the pedestrian realm subject to approval of a Temporary Encroachment Permit from the City.
43	Semi-permanent structures over the sidewalk, including entry features, arcades and perpendicular signage attached to the building may be permitted to encroach into the pedestrian realm subject to approval of an Encroachment Permit from the City.
44	Permanent structural components of the building (structured parking lots, colonnades and balconies) are not permitted to encroach into the defined pedestrian realm.
45	The amount of any permitted encroachment shall be established by the City on a site-by-site basis, and in consideration of the following criteria: the encroachment enhances pedestrian comfort by providing shade and/or protection from the rain; and, the encroachment does not impede pedestrian movement, and maintains an unobstructed sidewalk area of a minimum width of 5 feet.
Parking	
46	The City shall provide public parking lots (surface lots and/or structured parking facilities) within the Urban Corridors to augment the supply of parking.
47	On-street parking shall be promoted within all of the Urban Corridors.
48	The City shall pursue opportunities for the establishment of on-street parking in partnership with adjacent landowners where the spaces are provided on a combination of public land and private property, with public access to the parking spaces secured through agreements with the City.
49	Surface parking, loading areas, drive-through lanes and servicing facilities shall not be permitted in front of Transit Oriented Development buildings. Surface parking, drive-through lanes and/or servicing facilities may be permitted in an interior side yards, and are permitted within the rear yard.
50	Surface parking, loading areas, drive-through lanes and servicing facilities, where permitted, shall be appropriately screened from view from the street. Surface parking lots shall respect the build-within zones. Where surface parking must be provided, the visual impact of large surface lots shall be mitigated by a combination of setbacks, and significant landscaping including: pavement treatments, low walls or decorative fencing, landscape, trees and lighting throughout parking lots and along the edges.
51	Parking is encouraged to be provided in structures, either above, or where possible, below grade. Where a parking structure is above grade, it shall include a facade with active uses at grade and appropriate architectural articulation. Entrances to below grade or structured parking and service areas should occur within the building.
52	Access to parking and servicing areas should occur off side streets or service lanes and to the side or rear of buildings.
53	It is an objective of the City to limit access driveways to individual sites adjacent to the Transit Street. The City shall encourage shared access driveways and, preferably, shared rear lane access for all Transit Oriented Development. Where new development is proposed, the City shall require a minimum of 100 feet between access driveways onto the Transit Streets.
54	Within the identified Development Opportunity Area 2 - Corridor, where on-street parking is provided, the number of spaces may be deducted from the parking requirements of the abutting Transit Oriented Development.
Design Guidelines for Development Opportunity Area 2 - Corridor (non-mandatory)	
Pedestrian Realm	
55	Buildings shall be sited and organized to create a street space scaled to the pedestrian, and organized to present an appropriate façade to all adjacent streets to provide interest and comfort at ground level for pedestrians.
56	Main building entrances shall, wherever possible, be oriented toward adjacent streets to provide convenient access to pedestrians and public transit; buildings, and their main public entrances, shall be located close to the front and exterior side property lines, on-street parking, and the public sidewalk.
57	Buildings are to be generally sited parallel to the public street and along the edges of parks and open spaces. The public faces of these buildings are to align with neighboring buildings in a manner that defines these spaces with a consistent building face lining the street.
58	Non-residential buildings shall, to the greatest extent possible, front onto adjacent streets, be flush with grade and provide an active use at grade in order to promote pedestrian activity.
59	Buildings shall provide active façades that include windows and entry features and, where appropriate, outdoor cafés and restaurants, community services, retail stores and display windows.
60	Buildings shall connect to the street - by proximity, by the location of windows and entranceways and the level of architectural detail.
61	Street tree planting should form a continuous canopy along the street. Tree species should be selected by the applicable TIRZ/MMD to reinforce the role of the various street hierarchies within the Urban Corridors and to visually and thematically distinguish the Urban Corridors from one another. In instances where no TIRZ/MMD exists, the City will select the trees that they will plant.
62	Street trees should have a minimum size of 45 gal. and be planted 30 feet on-centre. Trees should be located in open planting pits where space permits and with wells sized at a minimum of 5'x10'. The planting pits should be filled with shrubs, perennials and annual plants. Planting pits should be edged with a low wall and/or fence.
63	Where space is limited, trees should be planted in continuous trenches. The rootball should be protected with a tree grate, ground cover or material such as gravel.
64	Where there is no room for street trees, consider a vertical shade element planted with vines so add special landscape treatment to the street.
65	Coordination of utilities, especially overhead power lines will be required during the design phase of street tree planting.
66	Consider a palette of the street furnishings, newspaper boxes, notice boards, bicycles racks, flower pots, luminaires and poles that will visually and thematically distinguish the each particular Urban Corridor from the others.
67	Concentrate mailboxes, vending machines, trash cans, and recycling bins in single locations to create active public space and minimize visual clutter.
Urban Squares	
68	An urban square shall have a minimum frontage on the abutting sidewalk of 15 feet, and a depth of at least 15 feet.
69	Large sites may include a single, large scale Urban Square/Plaza and/or a series of smaller Urban Squares/Plazas.
70	Urban squares shall be designed to reinforce a high quality formalized relationship with its adjacent building use and streetscape.

71	Hard and soft landscape elements and features within the urban square shall be designed to define and articulate activity areas, circulation, entry points, seating and gathering areas.
72	Urban squares shall provide sitting, shade, trash receptacles and bicycle racks.
Public Parks	
73	Provide public amenities such as washrooms and field house where appropriate.
74	Provide programmed activities for a range of ages and demographics with emphasis on children and youth.
75	Provide a balance of passive and active park space and provide for the maximum program flexibility in the design of the parks.
76	Incorporate a greening strategy that includes tree planting and seasonal horticultural displays.
77	Incorporate sustainability practices both in terms of capital projects and operations.
78	Provide wayfinding and program information displays as well as heritage interpretation and public art.
Gateways	
79	Gateways shall be either architectural, stand-alone features, or landscape treatments that define the main entrances to the Urban Corridors.
80	Features shall be lit to enhance their legibility at night.
81	The scale of the gateway shall be large enough to be visible from a car at a distance of at least 300 feet.
82	Gateways shall enhance and not compete with surrounding existing architectural and natural features.
Buildings	
83	Corner building designs shall articulate, define and enhance the intersection at which it is located by enhancing the building's presence at each corner.
84	Buildings should 'turn' the corner, i.e. they should have primary, articulated facades towards both streets and should be visually different from adjacent development.
85	Large areas and continuous rows of monotonous and repetitive façades shall be avoided. A more textured architectural quality can be achieved by introducing variation in certain elements of the façade treatment.
86	Variation in three-dimensional elements, such as balconies, bay windows and porches, cornices, window trim, entrances and the articulation of the building mass, shall be used to create a dynamic façade.
87	Variation and articulation in the building mass including horizontal and vertical setbacks, such as step backs at the upper storeys, shall be established.
88	A pedestrian weather protection system including awnings, canopies, colonnades, or front porches along the sidewalk edges and adjacent to the urban squares/plazas and at entrances to buildings shall be considered. The City will promote Temporary or Permanent Encroachment Permits for both signage and awnings.
Signage	
89	Signage will address the amount and type of illumination, size, materials, typography and design.
90	Signage should be an integral part of the architecture of a building.
91	Signs should be designed to complement the building and enhance the visual appeal of the street.
92	Signs should be designed in consideration of nearby residential uses, in terms of size, materials, and location.
93	The ratio of sign band to building mass should be restricted such that the signage does not dominate the facade.
94	Mobile box signage is not allowed.
95	Neon lights are allowed when they do not dominate the signage and have no negative impacts on nearby residences.
96	Exterior lighting shall be designed to promote pedestrian comfort, safety and provide a high quality ambiance. In addition, accent lighting is required to emphasize built form and landscape elements. Pedestrian scale lighting shall be provided adjacent to streets, walkways, urban squares, pedestrian routes and in parks, urban squares and courtyards.
97	Internally lit canopies are strongly discouraged.
98	Commercial facades should be appropriately lit.
99	Pedestrian realm signage and lighting should be coordinated. Pole mounted pedestrian light fixtures with a light source at 12 to 15 feet high and a spacing of 30 to 50 feet is recommended.
Mid-Block Pedestrian Connections	
100	Mid-block pedestrian connections shall be provided within larger development parcels. These are intended to be designed as pedestrian landscaped lanes and should be lit, landscaped and maintained for public
101	Mid-block pedestrian connections shall provide a fine grain of pedestrian circulation and an important connection between two streets.
102	Mid-block pedestrian connections shall lead to public destinations such as schools, parks and public transit stations.
103	Mid-block pedestrian connections shall provide an address to individual residential or business frontages along their lengths.
Pedestrian Character Major Thoroughfare	
104	The hard surface of the sidewalk (the pedestrian realm) shall be a minimum of 15 feet wide, measured from the back-of-curb to the main front wall and/or exterior side wall of any adjacent building. This requirement may include components of the public right-of-way and/or private lands, as described in the discussion of the build-within zone.
105	The design of the 15 foot pedestrian realm shall include a "furnishing zone" for utilities, street furniture and street lighting adjacent to the curb, and a minimum 7 foot, six inch unimpeded pedestrian sidewalk.
106	At all street intersections there shall be provisions for pedestrian crossings of the transit facility, regardless of whether or not the intersection is signalized. In addition, provisions for mid-block pedestrian crossings must be considered at intervals of approximately 300 feet. There shall never be a condition where distances between pedestrian crossings of the Facility exceed 600 feet. Countdown pedestrian head signals shall be provided for at all signalized crossings.
107	It is understood that the development of the required 15 foot pedestrian realm will occur over a long period of time, in conjunction with private sector redevelopment projects. In the interim, the City should build a connected sidewalk on the public component of the right-of-way concurrent with the development of the transit facilities. The maximum width of the pedestrian realm in this interim condition shall be 15 feet, to be measured from the back-of-curb to the edge of the right-of-way.
Pedestrian Character Major Collector	
108	The pedestrian realm shall be a minimum of 8 feet wide, measured from the back-of-curb to edge of the right-of-way.

109	The pedestrian realm shall include a minimum 6 foot wide sidewalk measured from the edge of the right-of-way. The sidewalk shall be continuous and extend across driveways.
110	The pedestrian realm shall include a planted boulevard with street trees next to the curb.
111	The planted boulevard should also be the location for utility poles, placed on the same alignment as the street trees.
Pedestrian Character Local Street	
112	The pedestrian realm shall be a minimum of 19 feet wide, measured from the back-of-curb or the edge of the outside vehicle lane to the edge of the right-of-way.
113	The pedestrian realm shall include a minimum 6 foot wide sidewalk. The sidewalk shall be continuous and extend across driveways.
114	On Pedestrian Character Local Streets with curbs, the pedestrian realm shall include a planted boulevard with street trees next to the curb.
115	On Pedestrian Character Local Streets with curbs, the pedestrian realm shall include a planted boulevard with street trees next to the curb.
116	The planted boulevard shall also be the location for utility poles, placed on the same alignment as the street trees.
117	On Pedestrian Character Local Streets with road side ditches, the tree shall be planted on the outside edge of the ditch adjacent to the sidewalk.
118	On Pedestrian Character Local Streets with road side ditches, utility poles shall be placed adjacent to the edge of the right-of-way.
Engineering/Infrastructure	
119	The width of travel lanes along streets with transit should generally be 10-11' in width,
120	Alleys should be designed to provide an 12'-0" paved surface,
121	No access should be allowed from the street for new developments fronting onto the street with transit,
122	All new development fronting on to streets with transit should indicated space for the provision of alleys or access to the site from side streets,
123	A plan for access to sites fronting onto the Transit Street should be developed before construction of the Transit Line showing the following: The preferred location for access into site along the line, A phasing plan for combined access over time, A phasing plan for the implementation of alleys or service lanes.
124	Provision for cross walks between stations should an integral part of the design of the streets with transit. The maximum distance between a station and a crosswalk shall be 1/4 of a mile.
125	The radius of corner conditions should be determined with the pedestrian in mind. Tighter radii corners slow traffic speeds and protect pedestrians. Along the streets with transit corner radii for through streets should be no more then a 25'-0" radius. For non through streets intersecting the transit street corner radii should be reduced to 20'-0"
126	Bicycle lanes should be explored as part of the design, access and phasing plans for the corridor streets. Where there is not enough room for bike lanes on transit streets, they should be part of the design of the connector streets that access stations.
127	Infrastructure services need to be developed with future intensification of the corridors in mind,
128	Infrastructure should be implemented as transit is being built,
129	The implementation and design of infrastructure should be carried out comprehensively including all departments of the City as well as utility providers,
130	All utilities should be buried along the corridors,
131	Consideration should be given to burying utilities under alleys,
132	Where it is impossible to bury utilities, the location of above ground components must be coordinated with the design of the pedestrian realm following the following guidelines: utility poles and transformers shall be located where they do not impact on the movement of pedestrians, utility poles and transformers shall be located according to an overall plan for the entire corridor, the form and design of above grade components to be approved by the City and Metro. Where possible, utilities should be located in alleys,
133	Accessibility should be designed into all sidewalk conditions along the corridors.

Additional Implementation Terms:

- Abutting** – two or more parcels sharing a common boundary of at least 1 point.
- Block** – all land fronting on one side of a street between the nearest streets, intersecting, meeting or crossing the aforesaid street.
- Easement** – a negotiated interest in the land of another which allows the easement holder specified uses or rights without actual ownership of the land.
- Encroachment** – a physical structure or partial structure that advances beyond established property boundaries into abutting properties.
- Exterior side wall** – the exterior side wall of a building or structure abutting a right-of-way or open space.
- Facade** – the exterior walll of a building exposed to public view or that wall viewed by persons not within the building.

Frontage – the minimum straight line distance between the intersection of the side lot lines and the front lot line.

Grade – the average elevation of the finished surface of the ground adjacent to the exterior walls of the building or structure.

Gross Floor Area – the number of square feet of total floor area bounded by the exterior faces.

Net Developable Site Area – the portion of a parcel or site that is remaining after requirements for minimum setbacks, yards, urban squares, easements and right-of-ways.

Parcel/Lot line, front, exterior, rear – the legal boundary of a parcel or lot of land.

Pedestrian Realm – the pedestrian realm is the area from the back-of-curb to the face of the adjacent building.

Main front wall – the main front exterior wall of a building or structure.

Setback – the horizontal distance measured at right angles to the boundary of the parcel, lot or block of land, between the main wall of the building and the main boundary.

Transit Street – A transit street is a street along which the transit line currently exists or is planned to be located.